The National Locksmith

The National Locksmith®

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CODES
'94 GM AA00-A999 PART 2
page 118

August 1996
Volume 67, No. 8

Deadbolt Demolition

page 48

ALSO THIS MONTH...

ISC East
Bonus Supplement

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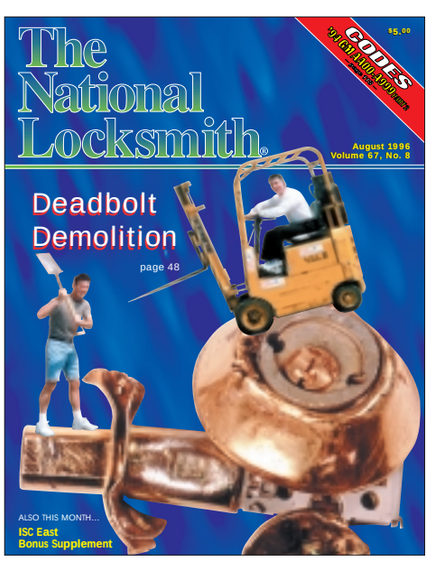

On The Cover

The demolition duo are on the loose once again. This time their focus is on high security deadbolts.

Click on the article you wish to read

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Commentary

Marc Goldberg
Editor/Publisher

I have some news for you this month that many of you have been waiting for. The 1996 update for the AutoSmart manual is now available. This massive new update has been a long time in the making, but it is now ready for shipment. It takes a bit of time to prepare updates for this book but I believe you will find this year's update to be well worth waiting for.

The update is quite large again this year, with a ton of new information added. When you purchase the 1996 AutoSmart Update, you will be receiving, in effect, a whole new book. You'll simply put your update into your binder, using the new cover sheet we will provide you. You may save your 1995 version as a spare. But you will find so much added information in the 1996 update that you won't want to be without it.

If you haven't yet purchased an AutoSmart, now is the time! To get your new manual or to update your old one, please see page 125 for further details.

On another note, I want to make my thinking clear about locksmith legislation and licensing. Boy, is this a sticky area. It is impossible for me to endorse one side or another without offending somebody! But they say you can't make an omelette without breaking eggs.

Be aware that I agree there is room for more than one opinion on this subject. If you disagree with me, I will respect your position. And if you do agree with my position, please understand that in the interests of fairness, I am obliged to offer space in the form of Letters to the Editor and the occasional article to those people who have the opposite view.

That being said, I am strongly in favor of licensing for locksmiths. I did not used to hold that opinion, but as you know I have revised my stand. The reason for my about-face has been caused by the amount of legislation being passed in various states by the alarm industry.

If we do not want to be legislated out of business, then we must get licensed by the 50 states in a way that does not kill the little guy, and in a manner that allows us to have some control over the requirements. I do not want to see us become licensed without helping to create the procedures.

Locksmith licensing...the time is now!

Both ALOA and the NLSA have been tracking a large number of laws which will, if passed, hurt the locksmith. If we were licensed, these groups would have a much easier time fighting our battle for us. It's time to support ALOA and the NLSA in this effort.

Locksmiths are an independent bunch and we do not like being told what to do. We don't like to give anyone power over us, not even our own associations. That is why I think that many locksmiths are not even association members.

But now is the time to support our associations as they seek to help us become licensed, big shops and little shops alike, and on equal footing. If we don't get involved in the process, we will suffer more as time goes on.

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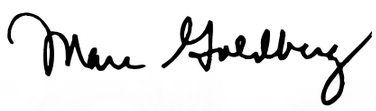

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Mango's Message

Greg Mango
Managing Editor

Only the Strong Survive

Last month I told you this industry is under siege and shared with you the very serious events that are unfolding in the state of Texas, with the enforcement of Article 4413 (29bb) V.A.C.S. under House Bill 713. This bill is being imposed by the Texas Board Of Private Investigators And Private Security Agencies, requiring anyone (including locksmiths) to possess an Alarm license to service or install any electronic locks or mechanical push button locks, even if the unit in question is not tied into an alarm system. The potential impact of this bill is staggering, with implications much farther reaching than just Texas.

This month, let's talk about who the real supporter of House Bill 713 is and why it was enacted, as well as what measures can be taken to counteract it. I'll also briefly touch upon what this industry is doing to combat this intrusive invasion by the alarm industry and what can be done to prevent any future surprise attacks.

Who's Responsible For HB 713?

The driving force behind House Bill 713, which Article 4413 (29bb) V.A.C.S. falls under, is the National Burglar & Fire Alarm Association (NBFAA). The NBFAA is the nation's oldest and largest organization representing the professional alarm industry. Founded in 1948, the association represents more than 3,500 member companies and over 30,000 employees in 40 Chartered State Associations. The Private Investigators and Private Security Agencies Act under House Bill 713, was passed by the Texas Legislature as a consumer protection law. The purpose of this law was to license and regulate the Private Security and Private Investigators profession, and provide a penalty for those who practice without a license. It also mandates that a minimum number of hours for continuing education courses be taken to maintain a license.

In the original version of House Bill 713, the inclusion of Section 33 which defined a "Detection Device" was not in the bill. Revisions and amendments to House Bill 713 was introduced to the Senate committee and House of Representatives for approval in May of 1995. The bill was passed with the new revisions — including Section 33 — designated to take effect September 1, 1995. This all encompassing definition of a "Detection Device" is what has ignited this conflicting controversy. Prior to its inclusion in House Bill 713, this industry as well as several other industries (we are not the only ones affected by this) were not restrained from performing such services.

What Was The Intent Of HB 713?

There is no doubt that a partial underlining intent to add Section 33 into House Bill 713 was to eliminate competition in the electronic security market. The NBFAA has been in a bitter battle with the telephone companies trying to prevent the phone companies from offering alarm monitoring services. The NBFAA's argument is that the phone companies are a monopoly engaging in unfair business practices. It appears however, that the NBFAA has lost its argument. Some phone companies are now providing alarm monitoring services.

You can imagine the impact the phone companies will have on the alarm monitoring industry. I believe the inclusion of Section 33 into House Bill 713 was an attempt on the part of the alarm industry to recover a portion of the business it knew it would ultimately lose to the telephone companies. That is however, only speculative.

What Can Be Done?

Currently, the only defensive measures those affected by this bill can take to combat such enforcement is to acquire an alarm license. I know that's not what you want to hear, but at present, there is no alternative. Until an amendment can be passed to include locksmiths in this bill rather than exclude them, the only option you have which will legally allow you to continue servicing electronic locks or mechanical push button locks is to get an alarm license. Knowing that, let's talk about the requirements to acquire an alarm license.

The requirements to obtain an alarm license is rather rigid, invasive and restrictive. Not everyone will qualify. A brief overview of the requirements follows.

License Requirements

There are three types of licenses available, a Class A, Class B and Class C. For locksmiths providing any type of electronic lock service, which is classified as an "Alarm Systems Company"

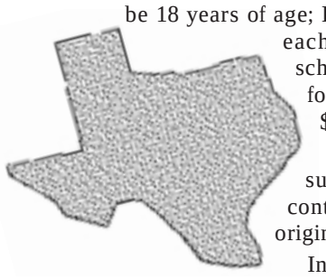
Continued on page 8

Click on border to view new company or issue

Continued from page 6

under Article 4413 (29bb) V.A.C.S., a Class B license is required. To qualify, you must have two (2) years consecutive experience for each category for which the application is being made prior to application. Experience must be documented in the form of signed and notarized affidavits. (At this time, the Texas Board Of Private Investigators And Private Security Agencies is allowing companies and individuals to show that if it has been installing access control devices on a regular basis for the last two years, this would be accepted in lieu of the two year apprenticeship requirement. Others would not qualify). Fees for a Class B license is $225.00, with an annual renewal requirement of $225.00. There is also a $25.00 original application fee.

A Class A, Class B and Class C license must also have what is termed a "qualified manager." A qualified manager must be 18 years of age; Be a Texas resident; Pass a written examination (there is no fee for the first examination, however, each additional test costs $100.00 and the examination is given by invitation only and will not be scheduled until the application has been approved); and be registered as the qualified manager. Fees for a qualified manager is $25.00 for the original application, with an annual renewal requirement of $25.00.



If you are an Owner, Officer, Partner of Shareholder of a company, you must register as such; and submit a police and sheriff letter from the city and county of residence (this is a letter of character containing any objection or recommendation as to the application). Fees for registration is $25.00 for original application and a $25.00 renewal fee every two (2) years.

In addition to the above, if you are the system or electronic lock installer, you must have an Alarm System Installers license. The fee for this is $25.00 with an annual renewal fee of $25.00. If you are responsible for the sales of such a system or device, you must possess a Security Sales license. The fee for this is $25.00 with an annual renewal fee of $25.00. If you are the sole proprietor of a business who not only sells electronic locking devices or access control systems, but also installs the system as well, you must possess both the Security Sales license and the Alarm System Installers license, in addition to all the previous requirements.

Background Checks

Every applicant in Texas must also submit to two kinds of criminal history checks, one by the Department of Public Safety and one by the F.B.I. There is a $25.00 fee for the F.B.I. criminal history check as well as a $25.00 original application fee. Along with the original application and two criminal history checks, two (2) F.B.I. fingerprint cards must also be submitted. There is a $25.00 fee for the F.B.I. fingerprint cards and the Texas Board Of Private Investigators And Private Security Agencies will only accept F.B.I. fingerprint cards which have been purchased through its office.

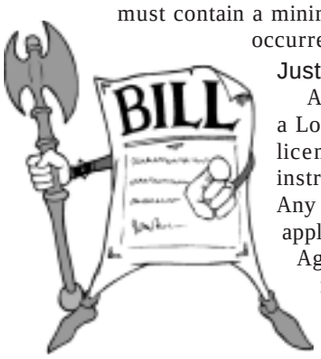
Personal Profile

Other applicant qualifications are:

1. You must not have been convicted in any jurisdiction of any felony (unless a full pardon has been granted). **2.** You must not have been convicted in any jurisdiction of a misdemeanor involving moral turpitude during the seven year period preceding the date of application (unless a full pardon has been granted) **3.** You must not have been declared incompetent by reason of mental defect. **4.** You must not be suffering from habitual drunkenness or from narcotics addiction. **5.** You must not have been discharged from the armed services of the U.S. under conditions other than honorable.

Insurance Requirements

To obtain any class of license described above, you must also submit evidence of a policy of general liability insurance on a form prescribed by the Texas Board Of Private Investigators And Private Security Agencies. The insurance policy must contain a minimum limit of $100,000.00 per occurrence for bodily injury and property damage, and $50,000.00 per occurrence personal injury, with a minimum total aggregate amount of $200,000.00 for all occurrences.



Just The Beginning

As I said previously, this is just a brief overview of the Alarm license requirements. (And you thought a Locksmith license would be rigid, invasive and restrictive!) If you are going to embark on the alarm license journey, I suggest that you dot all your "I's" cross all your "T's" read every direction and instruction thoroughly — following it to the letter — and be sure to get every form you fill out notarized. Any minor mistake, oversight, or careless action on your part can be grounds for a rejection. License application forms can be obtained from the Texas Board Of Private Investigators And Private Security Agencies, P.O. Box 13509, Austin, Texas 78711. If you have specific questions concerning licensing requirements, address your questions in writing to Clema D. Sanders, Executive Director, at the same address. To hear a recorded version of the license requirements call (512) 463-5545.

Industry Objective

The Associated Locksmiths of America (ALOA) and members of the National Locksmiths Suppliers of America (NLSA) have gathered together to discuss future strategies to thwart the all encompassing restrictions of House Bill 713, and monitor more closely the future tactical moves made by the NBFAA. Through enhanced monitoring and industry awareness, this pesky problem may be able to be resolved. Texas is the testing ground for House Bill 713. If this industry can stop, or at the very least, modify the enforcement of House Bill 713 upon this industry, this would prevent this same enforcement from coming to a neighborhood near you. Lets not turn our back on this issue. Ignoring it will not make it go away. Diligence and persistence will prevail. Let's cut the cancer before it's too late.

TNL

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Letters

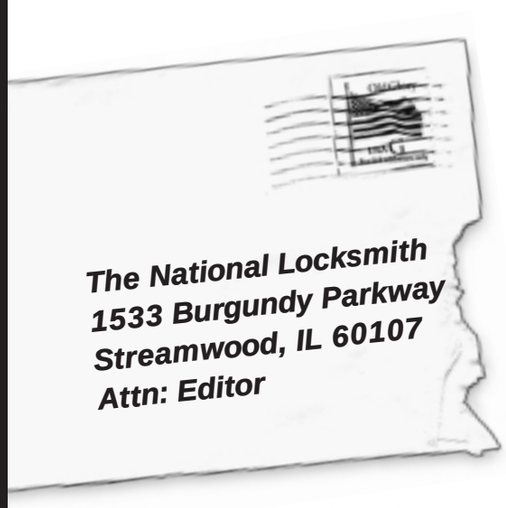
The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length.

Thumbs Up for Righteousness

Greg, I salute you for your story on "Righteousness," (June 1996 *Mango's Message*) and for your taste in authors, no doubt your also a "Chicken Soup" fan. It took several eye wipes to get through *"The Story Of Ping,"* but it did ring true. I am also passing a copy along to my wife and her friend as they too are instrumental in teaching Sunday schoolers.

I also applaud you for allowing yourself to be transparent. All to often we feel we have to protect ourselves in how others view us rather than letting them see us for who we are. We get so wrapped up in business competition and associations, and feeling that we have to put on airs, that we forget why we are here; *"To help others,"* and **honestly** and **really,** *"To do the best we can."*

Now what do you have for stories about Common Sense??? *Art Shobb*
Florida



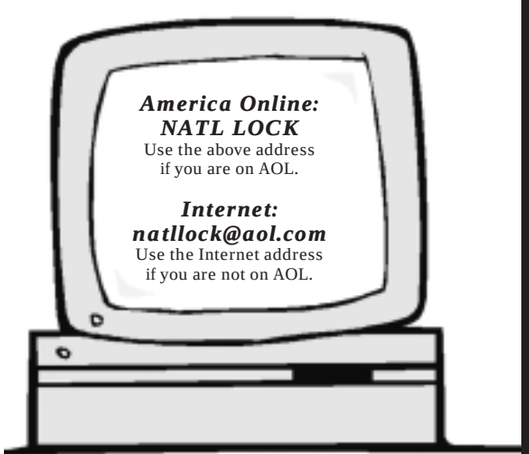
Trade Secrets

Regarding trade secrets, not all locksmiths are as "secretive" as we would hope. A local locksmith in Perrysburg, Ohio just this week told a reporter (to be printed in the local newspaper) that to prevent a lockout of your car, tape a key on the back of the license plate. I am sure all potential car thieves appreciated this service information, so they will know just where to look for someone's "hidden key" to their car. Can anyone say "Duh"? *Astraes*
E-Mail

Legislation Blues

I do not see why everyone is praising the Illinois License law. They pressed the State to pass it, which they did, but did not see it to it's end. Since the associations and the campaigns stopped, the state tagged this new law into the Private Detective, Private Alarm, Private Security Act of 1993. Instead of making a new law with its own fees, they are using fees already in force.

I am not against the law, we need it. What I am against is the lack of responsibility these northern associations have as far as trying to get a law passed without making it illegal to sell picks, by-pass tools, and books over-the-counter to anyone and everyone who has the money. At a local gun show I could have bought Majestic lock pick sets and pick guns, also a very good copy of HPC's Basic Picking. "Fortunately" the person selling these items is from the state of Missouri and did not have any business cards. There were several people selling stunguns also, which are illegal to carry in Illinois, but that is a different story.



As for *The National Locksmith* magazine, what can I say, it is the best one I have seen. Mr. Mango is a great addition and the new look is terrific!!! *Rodger Long*
Illinois

P.S. About *Mango's Message* in the May issue. I carry two sets of keys with me now that the same thing happened to me.

No! No! No! Not This Time

I've lost count the number of times I've read one of Greg Mango's editorials (and I've read every *Mango's Message* since the first one published in Reed's Security Reporter) and thought: "This is really great! I'm going to let Greg know how impressed I am." Well, you know how it is... Meant well... Intended to as soon as I finished... Whatever. But, as I said, "Not this time!" Your story about Ping, (June 1996 *Mango's Message*) in my opinion, is exactly what we need to be reminded of from time to time. Your commentary at the end of the piece

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(Ping's are an endangered species) is unfortunately all too true. And therefore, surrounded by a majority of "not so Ping like" individuals, it's all too easy to forget.

I'd just like you to know, that the day after I read your editorial, I was confronted with not one, but in fact, several situations where I had to decide between doing what would have been acceptable, or what was really the right thing to do. In each case, I choose the latter. Needless to say, I felt much better about myself. And for that, the credit must go to you. Oh, and to your wife as well.

Ginger Talasco
New York

Sued By AAA

I just wanted to commend Greg Mango on his *Mango's Message* editorial in the March 1996 issue of *The National Locksmith*, about the American Automobile Association (AAA). You did your research pretty well on the things that you wrote about. I thought that since I had been in a lawsuit with AAA, you might want to add some information if someone calls you for advice.

First, I might point out that AAA requested the trademark back in 1902 not 1965. I point this out only because it could be misleading for someone who started their business before this date, which could give them first right by law, and would have the right to the name AAA.

Also, where you state and I quote "Should the business have been AAA Roofing, or AAA Carpet, or AAA Florist, goods or services AAA does not provide, AAA would not, and could not have taken this action" you are wrong in this statement. On the "Principal Register Service Mark" it list only the letters AAA, and it is these 3 letters that is registered as the trademark and is not to be used. It does not matter what words follow after the letters AAA, nor the service you provide.

I would say however, your advice to change the company name from AAA Locksmith is very good advice. The only way to beat AAA in court is to prove AAA knew your company was in business for over 7 years and did not take action against you. That is almost impossible for one to do unless one has a receipt and canceled check with a number from AAA.

In my case, I found that no-one, and I mean no-one, will help you to fight against AAA, and that includes any of the associations. I was lucky I had insurance that paid my legal fees to the tune of 40 some thousand dollars.

Robert Thompson
Colorado

Editors Note: Mr. Thompson is correct. The American Automobile Association did make a trademark request for the AAA designation back in 1902, however, the trademark was not granted and awarded until 1965. Also, if any company uses the sacred "AAA" designation in their name, no matter what services it provides, it can be sued for trademark infringement. Recently, the American Automobile Association sued "AAA Legal Services", a law firm in Washington, DC, for trademark infringement and won. I can't impress upon you enough that if your company name includes AAA, you are positioning yourself in the crosshairs of a high powered rifle. If the American Automobile Association decides to pull the trigger, you're going to lose. —Greg Mango, Managing Editor TNL

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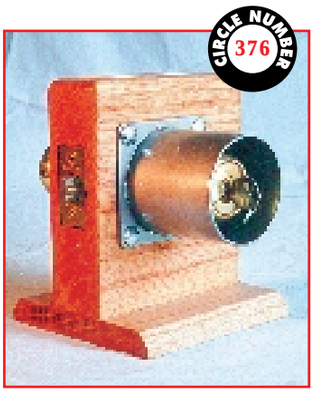
Tri-Star's Door Armor®

Door Armor, by Tri-Star Products, is a new security product that provides protection to doorknobs from vandalism and wrenching. Mounting to the face of the door, it completely covers the knob leaving only the front exposed to insert the key.



This product is designed primarily for store room function locks that require a key each time the door is opened as commonly found on commercial, industrial and apartment building. Door Armor consists of a 14 gauge structural steel tube welded to a steel based plate and is packaged with installation instructions and mounting fasteners. The finish is electrostatically applied, silver powder paint. Sales displays are also available.

New, Patented Key Control Cylinders From Medeco® To Retrofit Best® Style Interchangeable Cores

There is a new line of patented key control interchangeable cores from Medeco that retrofits Best®, Falcon® and Arrow® style locks. It's called KeyMark™ by Medeco®. KeyMark features a new technology that fights the unauthorized duplication of keys with a utility patented Security Leg™ keyway and key blanks. If you have Best style interchangeable cores, upgrade to KeyMark and get all the benefits of an I/C system PLUS utility patented key control from the company that defined key control. KeyMark is more than interchangeable cores, however. KeyMark is also conventional rim, mortise and knob cylinders that operate on the same key as the interchangeable cores. This means one key can operate all of the locks in your facility, you no longer need to carry separate keys for your Best® system and other conventional systems. KeyMark does it all. KeyMark cylinders will retrofit the most popular hardware on the market and gives you affordable key control.

Security Café

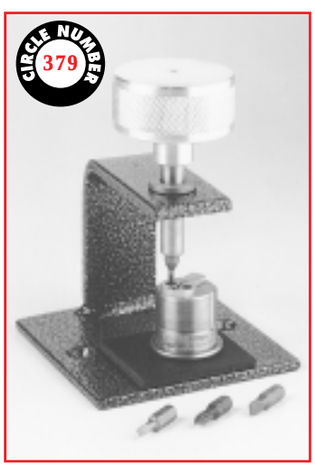
DROP IN FOR TOOLS, TECHNOLOGY & EQUIPMENT

The Turbo Automatic Key Selector

How many times have you searched for your keys to open a door, but it was dark, you had your hands full, or you needed to open the lock in a hurry? The turbo automatic key selector was invented to eliminate all these problems while being fun to use. The Turbo-key was designed to quickly and easily access your keys while using only one hand. In less than a second, you can select, and press the release button to use your key. Just like a cowboy quick draw gun show-down. The turbo automatic selector fits in the palm of your hand. The current model holds seven keys. When choosing a key, move the selector to position 1 through 7 and press the release button. The fun to use, spring-loaded mechanism snaps the key out of the gadget while the remaining six keys are locked in place.

Keedex's Spin Out

The Spin Out by Keedex, Inc. removes even the most stubborn cam screws from mortise cylinders. The Spin Out features a screwdriver with an oversized handle for extra torque. Comes with four sizes of interchangeable screwdriver bits — two slotted and two Phillips. Includes stand, with bronze bearing, to prevent the screwdriver from slipping. The Spin Out allows you to provide constant, even pressure to the screws.



Key-Carabiners by DRK Specialties

"KEY-CARABINERS" are inspired by the mountain

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climbers' rope tool, the carabiner. These are key rings for today's market, attractive, lightweight, and easy to use. Strong enough to support a mountain of keys yet able to release a single key with a gentle push lever action. Available in two sizes, two shapes and four bright anodized aluminum colors: red, purple, blue and green. Initial orders are shipped in 48 or 72 display assortment.

The New MicroTalk 99 Channel Radio

MicroTalk is a 5 watt VHF, 4 watt UHF, 99 channel, synthesized two-way radio with a die-cast aluminum frame, and operates on a frequency range of 136-174 MHz VHF, 436-470 UHF. PRICE INCLUDES: Rubber-flex antenna, 700 MAH Ni-Cad battery, belt clip, 110V AC wall charger and wrist strap. Two-year parts and labor warranty included.

An Entirely New Security System by Cargolock

Cargolock is an innovative security system designed specially for commercial vans that carry valuable cargo. Tradesmen have traditionally used padlocks on the doors to keep thieves from stealing their valuable tools and equipment. Cargolock provides a better and much more convenient method for securing these vehicles by using remote control deadbolt locks installed inside the rear and side doors of the van. The doors can't be opened from outside the vehicle. The system is tailored individually for Chevrolet, Ford or Dodge vans, and is designed for simple, quick and easy installation. Used with bulkhead and window screens, the cargo area of a van is totally secure. Cargolock is available with deluxe remote control features or without remote control—as an added feature to an existing alarm system.

Wood Door Concealed-Vertical Rod Exit Device by Yale

Yale Security Inc. is pleased to introduce the 7140 (F)(F20) WDC-VR Exit Device, an innovative, patent pending exit device series which has UL ratings of 20, 45, 60 and 90-minutes for wood fire

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doors, but does not require the use of unsightly metal edges—an industry first! The series is designed for use on Weyerhaeuser fire doors machined for YCVR and is the result of a cooperative development effort between Yale® and Weyerhaeuser—two of the most respected names in the door and hardware industry.

Steering Column Repair Kits For General Motors Vehicles

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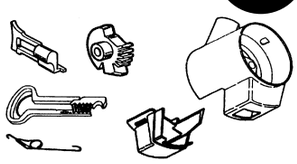

Quality theft recovery repair kits are now available for most General Motors vehicles with tilt wheels. These kits include the Upper lock bowl, Tilt lever cap, Sector gear, Dimmer switch actuator, Rac, and Spring. All collars are State Farm Insurance approved, made in the U.S.A., and have a black finish that doesn't need additional paint to match black interiors. There is one very popular collar fitting most vehicles and three additional collars that fit Van or Telescopic applications.

WestlockNational To Offer Standard 10-Year Finish Warranty

WestlockNational, Inc. has announced a 10-year finish warranty on their 640 Keyed Lockset and 680 Deadbolt, in addition to all solid or die cast brass entry handlesets. Entry handlesets included in the warranty are the 1800, 1600, 1300 Plus, 1300 and 1200 Series. The exclusive finish warranty covers tarnishing, flaking, pitting and discoloration. A power coated acrylic is baked on to each handleset to cure the lustrous finish to a durable shine. 640 Keyed Locksets and 680 Deadbolts are coated with ponetic lacquer and baked at 350 degrees for 15 minutes to set the finish. A 10-year warranty sticker on the package identifies Weslock-National's finish warranted products.

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A new locking key ring for vending, laundry, amusement and other operations requiring close monitoring of keys. The stainless steel shackle is secured into the solid aluminum body. The lock is recessed into the other end. This creates a tamper-evident system ideal for those who are responsible for a large number of keys. Available in three different lengths, and with three different levels of lock, Ace, Duo and Medeco. The Key Kop I is still available with

CIRCLE NUMBER 386

the nylon-coated stainless steel aircraft cable in place of the stainless steel shackle. The Key Kop I and Key Kop II are ideal tools to control the keys. The stainless steel shackle prevents the unauthorized removal of restricted codes and the possibility of subsequent abuse. This provides you with an easy way to organize your keys as needed, yet maintain a tamper-evident system to manage and supervise your key to security and profits.

Darex High Performance High Production Drill Sharpener

The new Darex AP5000 Automatic precision Drill sharpener is the latest in technologically advanced drill sharpeners.

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This micro-controller based drill sharpener with LCD display is designed to increase production and reduce operator fatigue. The AP5000 automatically aligns the drill and turns the chuck. Hands-free operation allows you to stay productive while the AP5000 sharpens drills. The LCD panel displays status as the operator sets or changes relief and material removal. This Darex sharpener sharpens drills from 1/16 to 1 inch in diameter, and splits the drill point for self-centering. Designed for simplicity of use, the Darex AP/5000 is perfect for use by people of all skills who demand consistent accuracy. In addition to the AP/5000, Darex manufactures a broad range of other affordable precision cutting tool sharpeners including drill, end mill, tap, reamer, and countersink sharpeners.

H.E.S. Introduces the Mew 7500 Series Electric Strikes

H.E.S. is introducing the most advanced electric strikes manufactured today. The new model 7501 (ANSI

CIRCLE NUMBER 388

4-7/8") and model 7505 (9") heavy duty electric strikes, is U.L. listed for 3 hour fire door applications. These units are user friendly, designed with the solenoid internally mounted for compactness and ease of installation. In addition, the 7500 series is capable of releasing under excessive door loading conditions (approximately 30 lbs.) and are easily field reversible from fail secure to fail safe (U.L. listed for fail secure only). The 7500 series is constructed entirely of stainless steel, for strength and durability making them ideal for all high usage applications.

Jet Introduces New Key Blanks

Jet Hardware is pleased to announce the immediate availability of two new automotive keys, B88-NP to fit the Saturn and DA34-NP to fit Nissan Automobiles. In addition to the automotive releases, Jet has also added to their line, M1R to fit the Ferrum 50MM (and possibly several other imported padlocks, M3 for Master and IN35 to fit Ilco.

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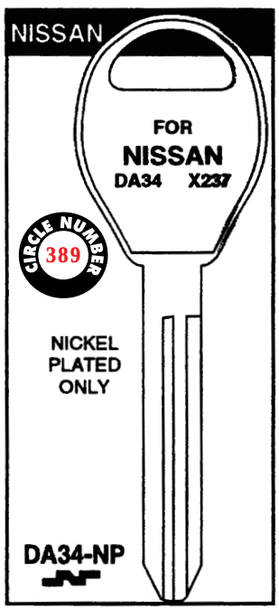

Jet is also making immediately available their High Security Plastic Head key blanks for BMW, Mercedes Benz and Volvo automobiles. Plastic Head blanks as manufactured by Jet are precision milled on the finest brass and have a bright nickel plate finish. They are packaged in poly bags consisting of 5 keys and 25 per box. For further information, please contact your Jet distributor or write Jet Hardware Mfg. Corp., 800 Hinsdale St., Brooklyn, NY 11207.

Locksoft Inc's., Software Solutions

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Offering an array of masterkeying and key control software to fit just about any budget and level of required features. If you have a masterkey system requirement, Locksoft has a program that can fill the bill. Such software programs are the:

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MK2 generates master key systems with up to 4 levels of keying and 5- to 7-pin cylinder lengths. Suggested Retail Price: $749.00

MK1-MASTER KEYING PROGRAM:

MK1 is a simple, easy-to-use master keying program that generates bitting lists in the Standard Progression Format (SPF). Suggest Retail Price: $199.00

KRM-KEY RECORDS MANAGER:

KRM records the information on doors and key bitting combinations, and on key holders. Then it tracks the issuing and returning of keys. Suggested Retail Price: $995.00

KCD-KEY CONTROL DOCUMENTS:

KCD is a Standard Universal Key Control Policy, in 3 versions, for hospitals, universities and businesses. These versions are on diskette, so the user can customize to the needs of the specific facility. Suggest Retail Price: $65.00

TBX-TOOLBOX:

The Toolbox diskette is a collection of useful programs for the locksmith. Suggested Retail Price: $59.00

CUSTOM SOFTWARE:

Locksoft's combination of locksmithing know-how and programming expertise is available for custom programming needs. Suggested Retail Price: By quotation. For more information on Locksoft products call: (402) 461-4149.

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GENERAL SECURITY
Test Article #130

Medeco Interchangeable Core Locks

by
Sal Dulcamero, CML

Medeco is known for its high security locks with rotating chisel pointed pins, sidebar and angled cut keys. It makes a wide variety of lock cylinders, and included among its product line are three different types of interchangeable core locks. The main IC lock is the 32-series High Security Interchangeable Core cylinder. They also make the 31-series I-Core which is designed to fit into Yale style IC housings. Their most recent introduction is called KeyMark, which is a patented key control Best-style IC system.

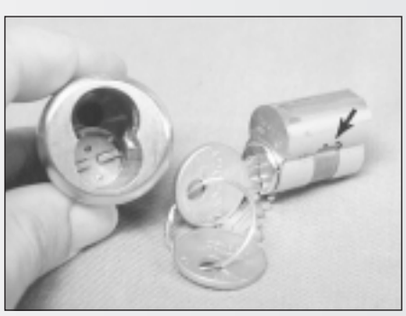
This article will be limited to the discussion of Medeco's 32-series I-Core. The 31-series I-Core will be briefly discussed in a future article about Yale's interchangeable core system.

The Medeco 32-Series I-Core

The mechanical operation of Medeco's 32-series I-Core is considerably different than Best-style and Schlage I-Cores (both previously profiled in this article series). Best-style cores have a second completely separate shear line that runs the length of the core. A Best control key will have different cut depths in each tumbler position than an operating key, and the core will use build-up pins to allow both control and operating keys to serve their functions.

1. An example of a Medeco core and housing.

Schlage I-Cores have a core retaining pin at the back end of the core. An operating key and control key will be nearly identical to each other, except for the fact that the control key will be longer. The extended tip of the control key helps to actuate the core retaining pin.



2. The control key has been rotated counterclockwise in to draw in the locking lug.

Medeco's 32-series I-Core doesn't follow either of those principles. An example of a Medeco core and housing is shown in *Photograph 1*. The core retaining, or locking lug, can be seen extending out from the right side of the core. The locking lug is part of the control sleeve, but unlike Best, the control sleeve does not extend the full length of the core. Instead it covers the span of two pin chambers roughly in the center of the core. Specifically, they are the third and fourth pin chambers from the front end of the core.

3. The Medeco 32-series I-Core requires counterclockwise rotation of the control key to draw in the locking lug for insertion or removal of an I-Core.

The control key has been rotated counterclockwise in *Photograph 2*, to draw in the locking lug. In this position, a Medeco core can be inserted into or removed from a compatible housing. There is a clear view inside the "figure 8" shaped cavity of the Medeco IC housing in *Photograph 2*. Looking inside the cavity on the right side, you can barely see the cutout that accepts the locking lug of the Medeco I-Core which keeps it retained inside the housing.

The Medeco 32-series I-Core requires counterclockwise rotation of the control key to draw in the locking lug for insertion or removal of an I-Core *(Photograph 3)*. Virtually every other type of interchangeable core lock system requires clockwise rotation to draw in the locking lug (or core retainer).

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4. Below the assembled core and housing, is a control key and an operating key.

The Control Key

In *Photograph 4*, below the assembled core and housing, is a control key and an operating key. The control key is on top. This Medeco I-Core has six pin chambers, but the last (sixth) pin chamber is empty. That is why both keys have only five cuts each. Compare the control key with the operating key. You may notice that, except for the third and fourth cuts from the shoulder, the other three cuts are the same on both keys. The key cuts for the control key are as follows: 34123. The cuts for the operating key are: 34453. Although it will be more obvious later, the cut angles on both keys must always match. The view of the keys does not reveal the cut angles, but they just happen to be LRCRC. That applies to both control and operating keys.

In a Best-style core, the control sleeve which creates a second shear line runs the full length of the core. Because of that, a Best control key will not normally share cuts in common with an operating key. Since Medeco cores have the control sleeve in line with only the third and fourth pin chambers, only those two cut positions will have different cut depths than the operating key (or TMK if master keyed). All the other cuts are common to both keys. A five cut key will have cuts common in positions 1, 2 and 5 (bow to tip). A six cut key will have common cuts in positions 1, 2, 5 and 6.

The Control Sleeve

Illustration 1, shows a front view of the Medeco IC cylinder control sleeve. At the top right of the control sleeve is where the locking lug is located. That is what keeps a Medeco I-Core from coming out of a housing, unles, of course, a control key is used. The space at the top of the control sleeve (identified by the arrows) is the thickness of three standard Medeco depth increments. An original Medeco with six depths has an increment of .030" between

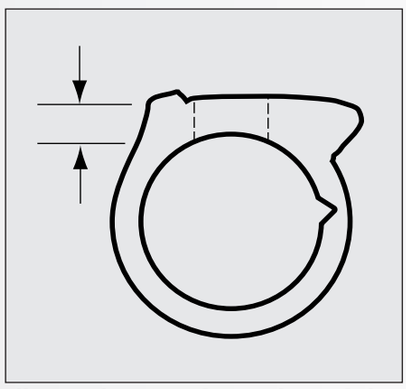

Illustration 1. A front view of the Medeco IC cylinder control sleeve.

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each size. Three depths would make the space at the top of the control sleeve .090".

What appears from this front view to be a slightly raised surface at the top left of the control sleeve, would actually be two slightly raised surfaces if viewed from the top. The two raised spots are located to the left of each of the two pin chambers contained within the control sleeve. Those features did not exist on the original version of the control sleeve for the Medeco I-Core, but were added in a design change in early 1992. The original version had some problems with cores that had #1 size master pins in the chambers contained within the control sleeve.

As the lock and the pins started to wear over time, the gap between the shell and the control sleeve would sometimes allow thin #1 master pins to slip out or jam. The raised surfaces in the redesigned control sleeve were made to keep those thin pins from slipping through. If you ever run into any pre-1992 Medeco I-Cores with that problem, you can order just the control sleeve and salvage the rest of the existing core. If you are not using any #1 master pins in those two chambers, the problem shouldn't occur. In that case you don't necessarily need to replace the old control sleeve.

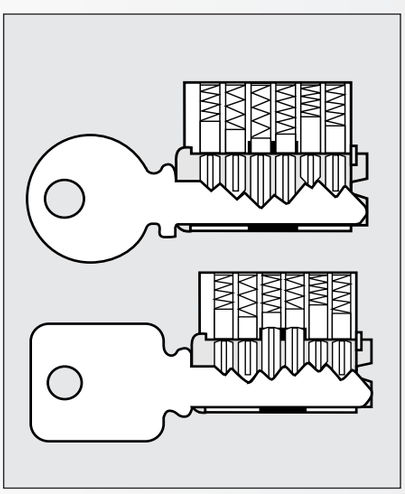

Illustration 2. A side cutaway views of the Medeco I-Core to illustrate how the control sleeve works.

Illustration 2, shows side cutaway views of the Medeco I-Core to illustrate how the control sleeve works. On the top is the core with an operating key. All the pins are lined up at the operating shear line, which allows the plug to rotate and operate whatever lock mechanism to which the core and housing assembly is attached.

The illustration on the bottom is a core with a control key inserted into it. The control key cuts are the same as the operating key in all positions except for the third and fourth. The third and fourth position cuts are exactly three depths shallower on the control key than on the operating key. That causes the top surfaces of those two pins to be raised three depths higher. I've already indicated that the thickness at the top of the control sleeve is also the equivalent of three depths thick. This effectively creates a two tiered shear line. The two pins at the front and the two pins at the back of the core are at the normal shear line, while the two center pins are at a separate higher shear line.

When the control key is rotated counterclockwise, those middle pins pick up the control sleeve and cause it to rotate with the plug. That motion is self limiting. It will only rotate far enough to pull in the locking lug on the control sleeve.

The Rule of Three

Because of the control sleeve design, there will always be a three depth differential between the control key and the operating key in the third and fourth pin positions. If you do some subtraction, you will see that the control and operating keys that were shown in *Photograph 4*, also followed that rule.

I had identified the control key cuts as: 34123, and the operating key as: 34453. If you subtract three from the third and fourth cuts on an operating key for a Medeco I-Core, you will know what the control key cuts should be in those same positions. For our example, four minus three (third cut) gives us one, which is the control key cut in that position. For the fourth cut, five minus three gives us two, which is the fourth cut on the control key.

This is very useful information for the locksmith who needs to service a Medeco I-Core cylinder. If the customer has lost or misplaced the control key, you can use the operating key to determine the proper cuts and create a new control key.

Consequences to the Rule of Three

There are certain unavoidable consequences to the design of the control sleeve and its rule of three. First of all, certain cut combinations cannot be used in the third and fourth pin chambers. Because the control key cuts must be three depths shallower to engage and operate the control sleeve, there is a limit to how shallow a cut can be which is used in those two pin positions on the operating key.

Let's test the limits. We will see what happens when we attempt to go beyond the recommended boundaries for keying and pinning the Medeco interchangeable core. This will apply only to the pin chambers contained within the control sleeve. For your operating key, I'll suppose that you want to make a #3 cut in the third position and a #2 cut in the fourth position. I'll apply the rule of three and subtract three from both numbers. When I subtract three from three (third cut) I end up with zero, and subtracting three from two (fourth cut) leaves negative one. We know that the shallowest cut on a Medeco key is a #1 cut. It seems that it is physically impossible to make a control key to work with a Medeco I-Core coded in such a way.

Here are the numbers that you must remember when picking key cuts in the third and fourth positions for operating or control keys. The operating key cuts can be: 4, 5 or 6. If you subtract three from any of those numbers, you will always come up with a useable Medeco depth. For the control key, the cuts in the third and fourth positions will be: 1, 2, or 3.

When master pinning in those pin chambers, you've got a few other things to watch out for. Although change keys can have depths shallower than #4 in those two positions, the top master key (TMK) must follow the same rule as an operating key for a non-master keyed cylinder. The reason is that the control key will be based on the TMK cuts, since the TMK should operate all cores in the master key system.

There are a few other important restrictions. Normally with a master key system, you always avoid using any of the master key cuts on a

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change key. You will still do that, but you will also want to avoid using any control key cuts on a change key.

Because of the three depth thickness of the control sleeve, you should avoid like the plague, having #3 master pins in both those pin chambers. You would be asking for a serious lock malfunction. You would have two operational shear lines at the same time. The pins would split at the plug and the control sleeve simultaneously. Needless to say, just don't do it.

Medeco Biaxial

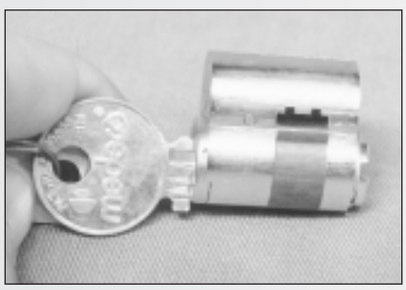
When Medeco introduced the Biaxial high security cylinders, they made a Biaxial version of virtually every product they made in original Medeco. Likewise, there is a 32-series interchangeable core in Biaxial. *Photograph 5*, shows a front view of a Biaxial I-Core. The external dimensions are identical to original Medeco. *Photograph 6*, shows a side view of the same I-Core. You may notice that this core is shorter than

5. A 32-series interchangeable core in Biaxial shows a front view of the core.

the one shown in earlier photographs of this article. That's because this is a five pin core. Although the other one had five cuts on the keys, it was a six pin core.

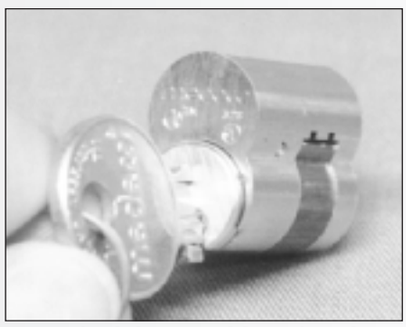
A Biaxial core will fit into a housing designed for original Medeco cores, but only with the proper length. A five pin core must use a housing designed for that length, and a six pin core likewise. Compatibility is based on core length, not whether it is original Medeco or Biaxial.

There are physical differences between original Medeco cores and Biaxial, but they are not the external dimensions. The difference involves



6. A side view of the Biaxial I-Core.

an internal dimension related to the control sleeve. *Photograph 7*, shows a Biaxial control key drawing in the locking lug, which would allow insertion or removal of the I-Core.



7. A Biaxial control key drawing in the locking lug, which would allow insertion or removal of the I-Core.

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8. The six pin regular Medeco style core and housing are on the left, and the five pin Biaxial core and housing are on the right.

9. These cores are not interchangeable between the two different housings, but it is core length not Biaxial or original Medeco which causes incompatibility.

10. A mortise Biaxial cylinder with what is known as a dome face plug.

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The Biaxial control key has cuts in the third and fourth positions which are exactly three depths shallower than the operating key. That seems to sound exactly like original Medeco. Well it is and it isn't.

Medeco Biaxial has a .025" increment, while original Medeco has a .030" increment. When it comes to the rule of three, both versions are computed in the same way. The dimension of the thickness at the top of the control sleeve is different. Three times .030" made the original Medeco control sleeve .090" thick. Three times .025" makes the Biaxial control sleeve .075" thick. There is a .015" variation in thickness between the two different control sleeves.

In *Photograph 8*, the six pin regular Medeco style core and housing is on the left, and the five pin Biaxial core and housing is on the right. These cores are not interchangeable between the two different housings, but it is core length not Biaxial or original Medeco which causes incompatibility. The side view of the loose cores shown in *Photograph 9*, makes that obvious.

The Dome Face Plug

Photograph 10, shows a mortise Biaxial cylinder with what is known as a dome face plug. This is not an IC cylinder, but some 6 pin I-Cores are available with this style plug face. It is not available for 5 pin cores.

The purpose of the dome face plug is to reduce the likelihood of key breakage, by placing most of the stress during key rotation on the key shoulder rather than the key blade. *Photograph 11*, shows the key shoulder engaged in that slot in the face of the plug.

The dome face plug is recommended for cylinders used in detention facilities and other applications where accidental key breakage may put the key user at some risk. It is available for a variety of Medeco lock cylinders, including the 6 pin interchangeable cores.

Best Interchangeable Core-Corrections

Earlier in the year, Best-style IC was explained in a three part series of articles. In part 2 (April 1996) the first paragraph incorrectly identifies the pin diameter. It was listed as

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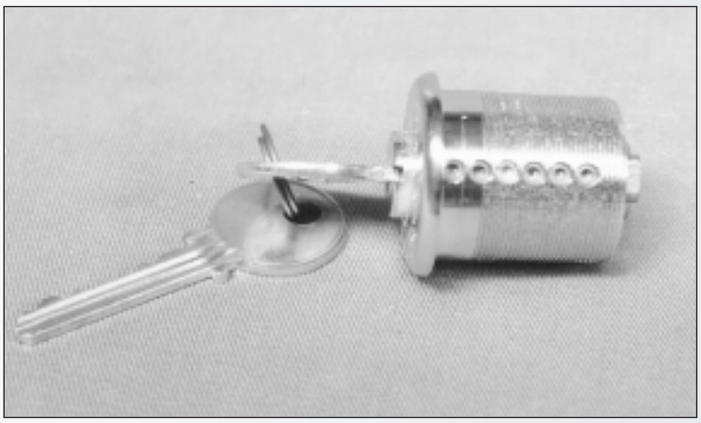

11. The purpose of the dome face plug is to reduce the likelihood of key breakage, by placing most of the stress during key rotation on the key shoulder rather than the key blade.

.110", but it should have been .108". This will not affect most locksmiths, since you don't manufacture your own pins. This dimension has been used in other articles, that's why I originally thought it was correct and it's best to catch this stuff early before it is presumed to be fact.

I also made reference to a calculation to determine the control key cuts. When I have taught this subject in a class, I have emphasized that the formula only works when the core has been coded correctly and according to the rules. I did not stress that sufficiently in the article. It is possible to use an improper size top pin in a chamber and not affect the operation of the lock. This is sometimes done accidentally, but also is done intentionally to deceive someone attempting to decode the control key.

If you run across such a core, you can still decode the control key. It just takes a little more work to accomplish the task. You must measure all the other pins except the top pin and determine the stack height. Subtract that number from what should have been the correct stack height if a correct top pin was used, and that will tell you what should have been the top pin size. All you have to do is subtract that number instead of the size of the actually used top pin and you will have the correct control key cut.

The other item has to do with the graphic representations which showed how to determine the pin sizes. For A-2, A-3 and A-4 they looked like a stack of pins with the required computations printed inside. The original source for those graphic depiction's was not identified by me in the article. They were originally created by A. J. Hoffman (formerly with Corbin Russwin). He also pointed out the errors (to me) mentioned above. My thanks to A.J. for correcting those errors, and my sincere apologies to him for not identifying him as the source for the graphics. TNL

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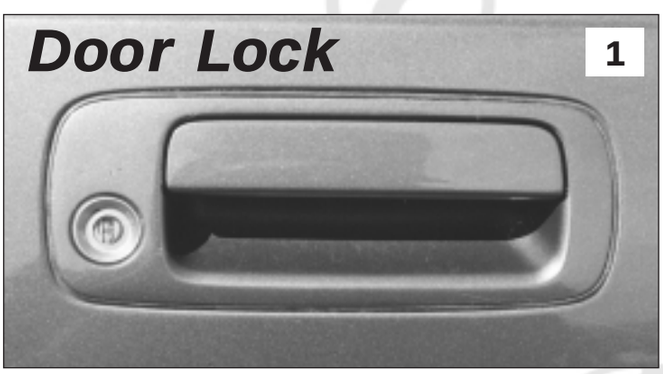
LS400 Service Procedures,

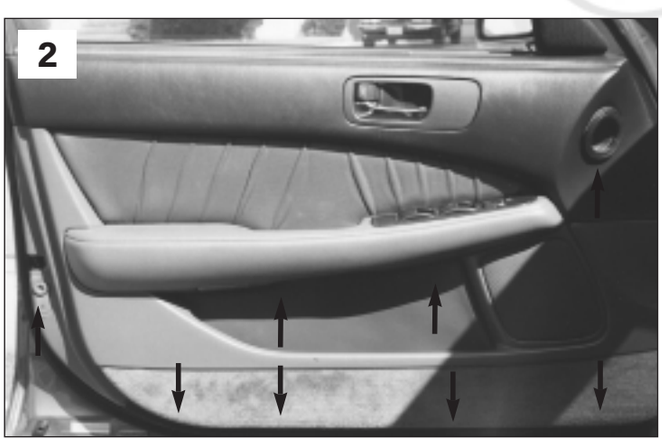
Part 2

Continued from February 1996

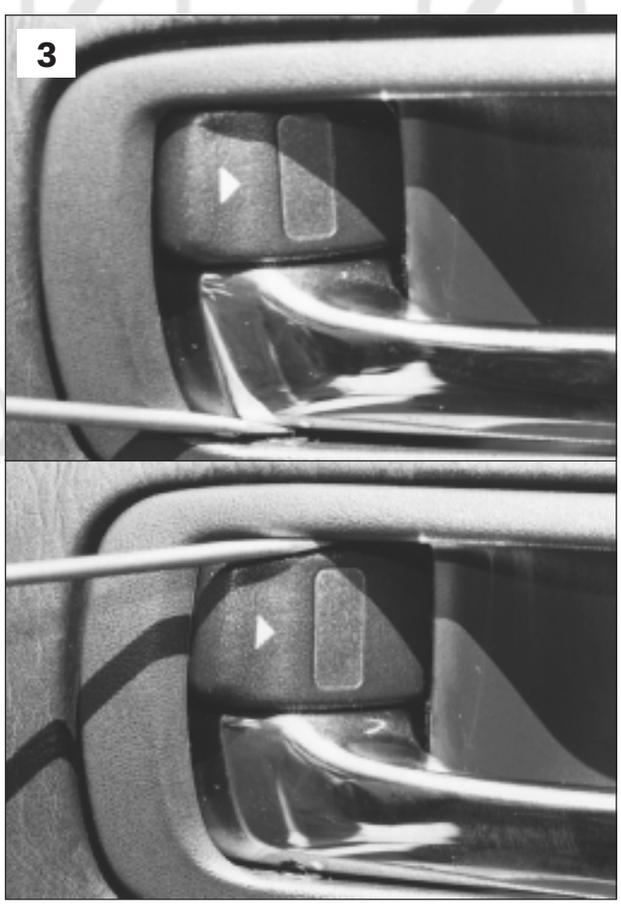
by Michael Hyde



The door lock and handle are part of one assembly and can only be removed from the inside after removing the door panel.



To remove the panel remove the four screws on the very bottom of the panel, the two screws under the arm rest, the screw located near the latch assembly and the screw located in the heater vent tunnel.



Next, remove the trim piece on the inside release lever. Use a small screw driver to gently pry the trim out from the top and bottom pin retainer.

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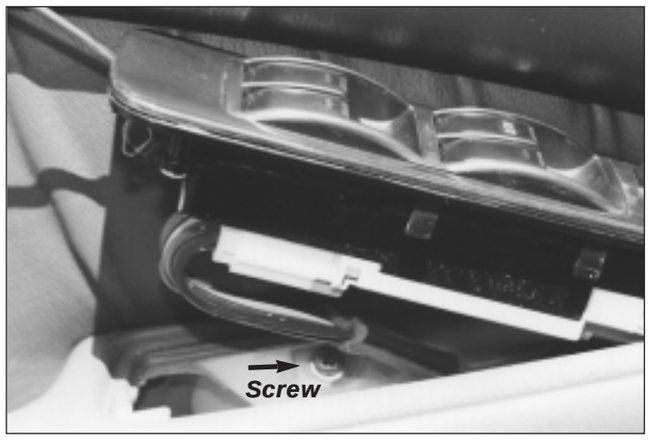
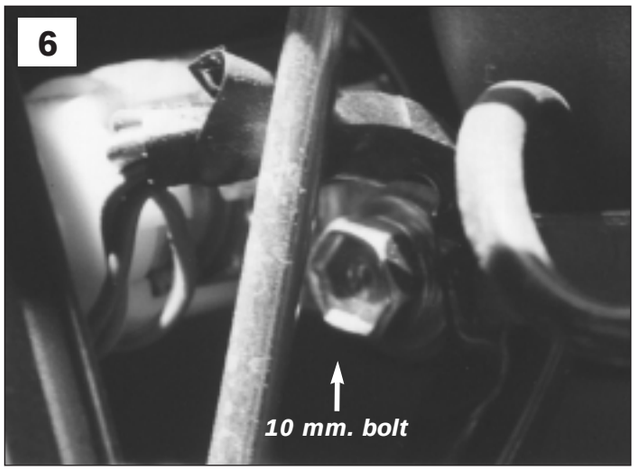
Continued from page 26

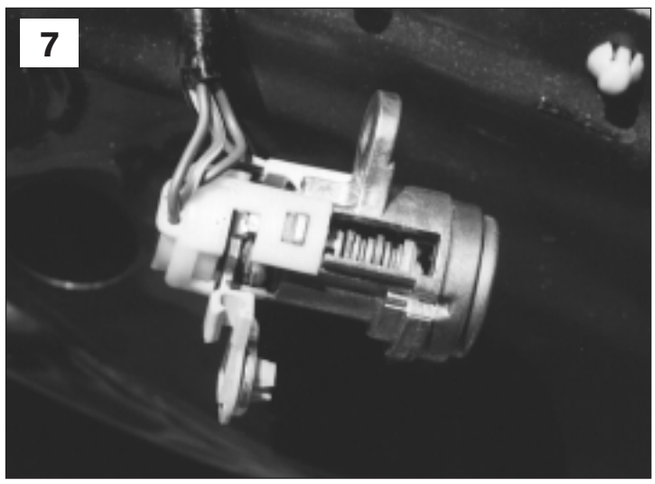


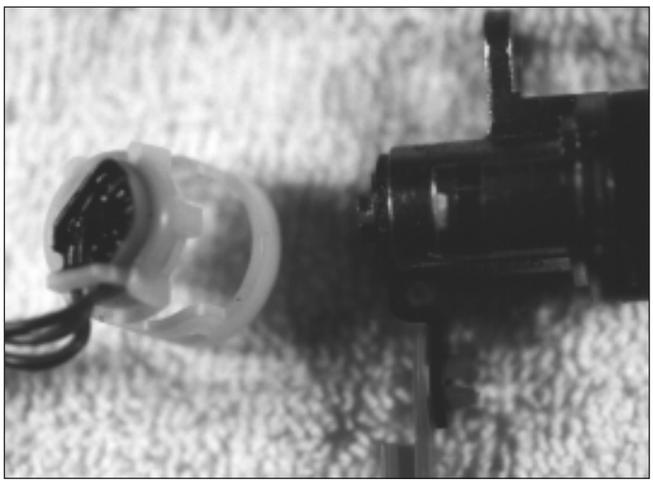
Then, gently pry up the electric window controls, to gain access to the one hidden screw located in this cavity.

Photograph five is a view of the driver's door with the panel removed.



Use a 10mm socket to remove the lock from of the door handle.





The lock is connected to the cars computer system and the switch just snaps off, providing a view of the code stamped on the lock.

Continued on page 30

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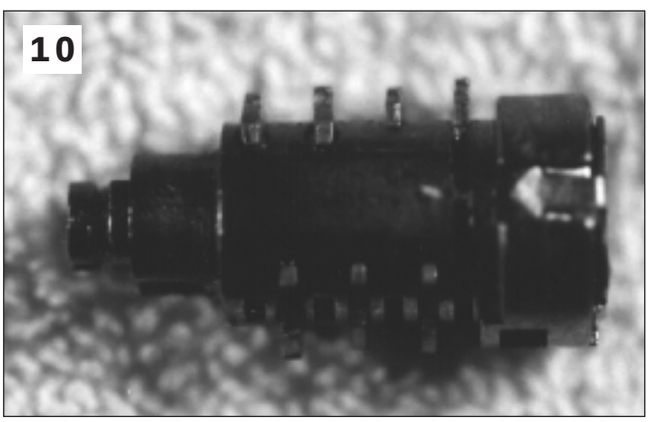
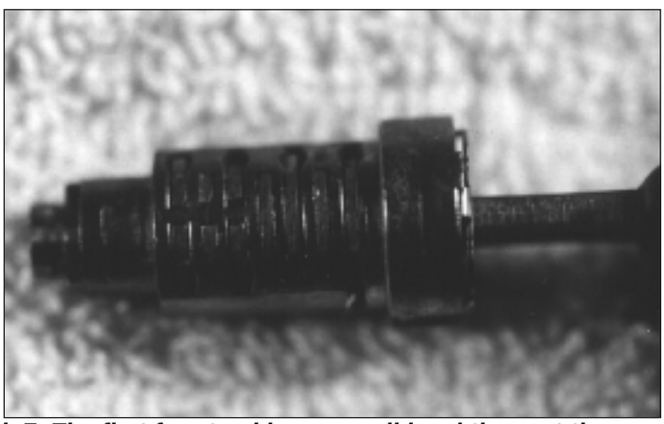
To disassemble the lock you must snap off the black plastic trim cap.

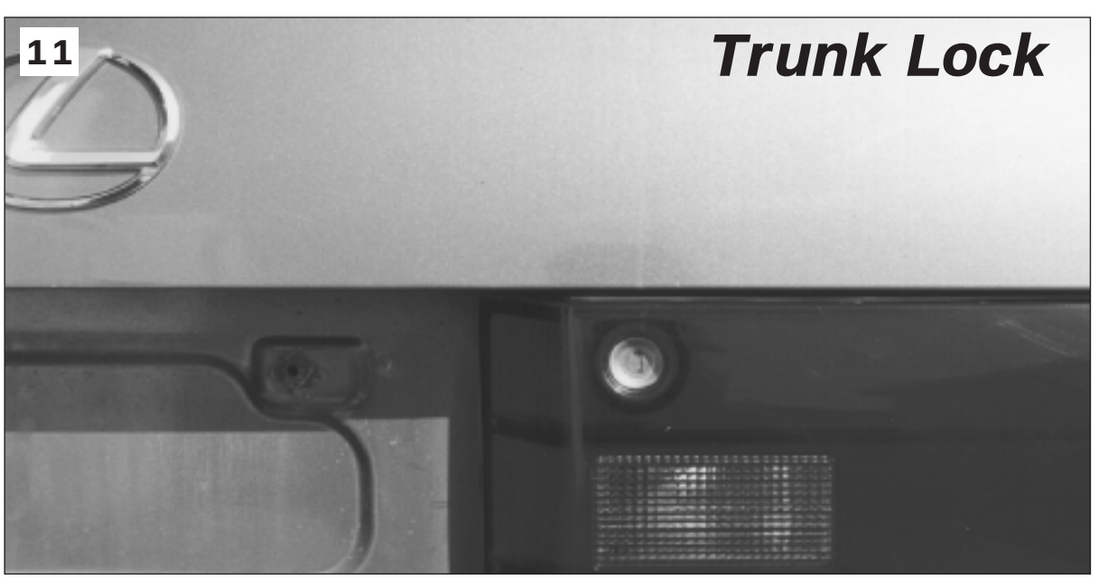
Next remove the reusable face cap and the E-clip that holds the tailpiece on. Slide out the cylinder plug.





The door cylinder contains tumblers in positions 1 through 7. The first four tumblers are solid and the next three are split.

Trunk Lock



Photograph 11 shows where the trunk lock is located on the car. With the exception of the ES250, which requires tail-light assembly removal, all Lexus trunk locks can be removed from the back.

Continued on page 32

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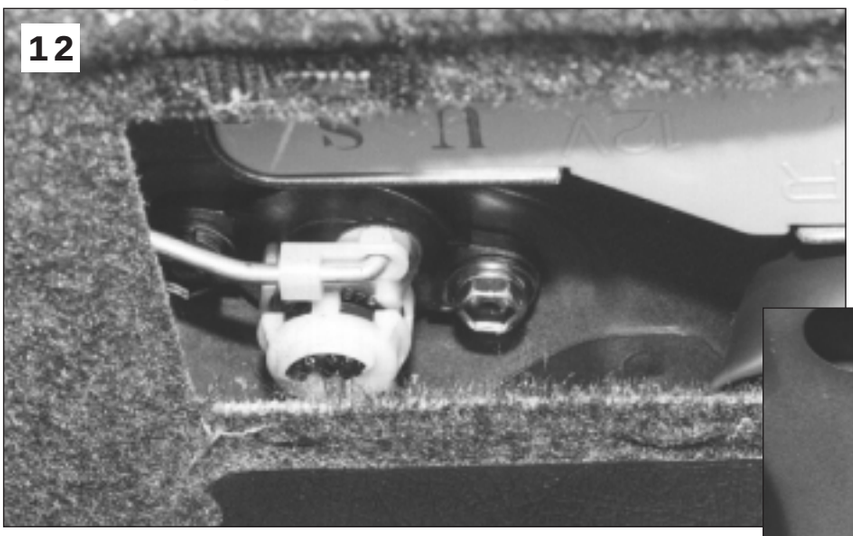
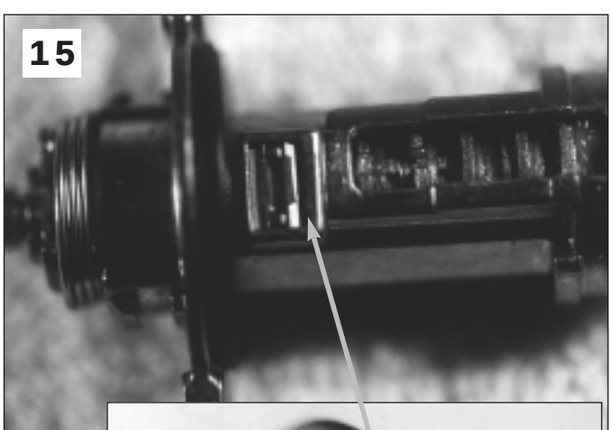
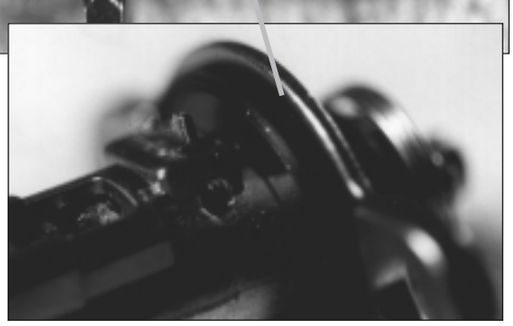


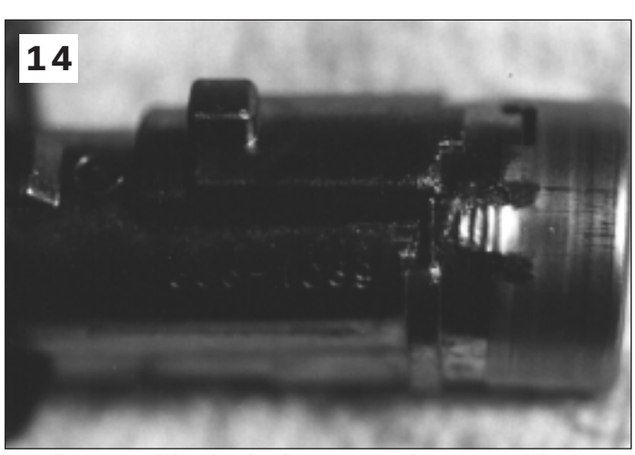
There is an access hole in the deck lid liner where the lock can be seen. It is best to partially remove the liner as not to damage it.

To remove the lock, unsnap the electrical switch on the back of the lock, remove the linkage rod, and then remove the two 10mm bolts that hold it in place.





There is a retainer in the back of the cylinder housing that keeps the plug from being forcibly removed. Drill to the side of the retainer and pry it out.



To disassemble the lock remove the re-usable face cap off the lock.

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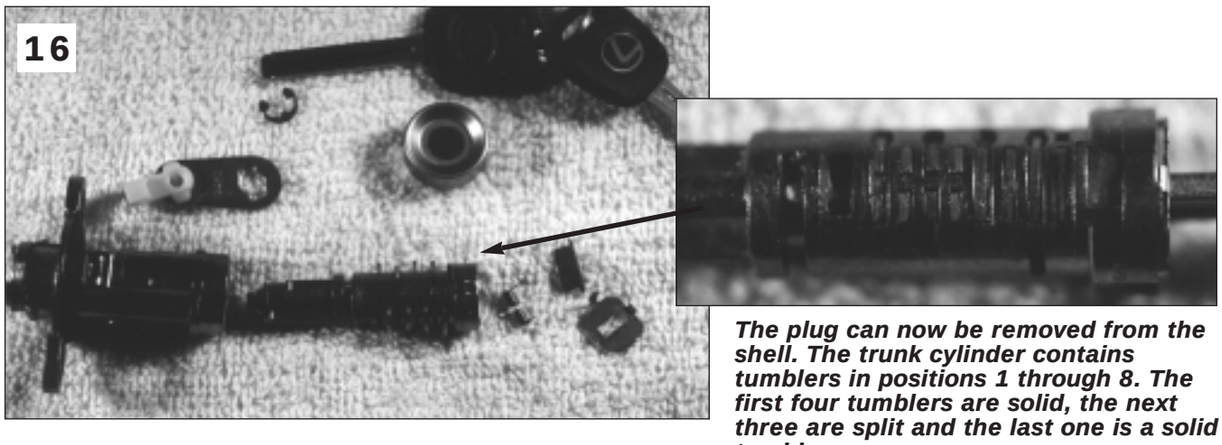
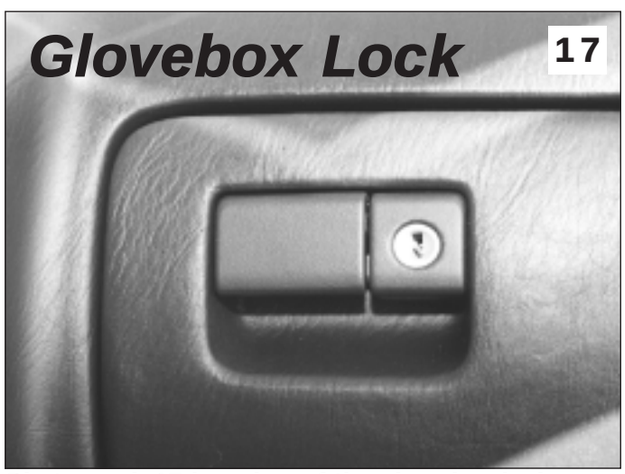
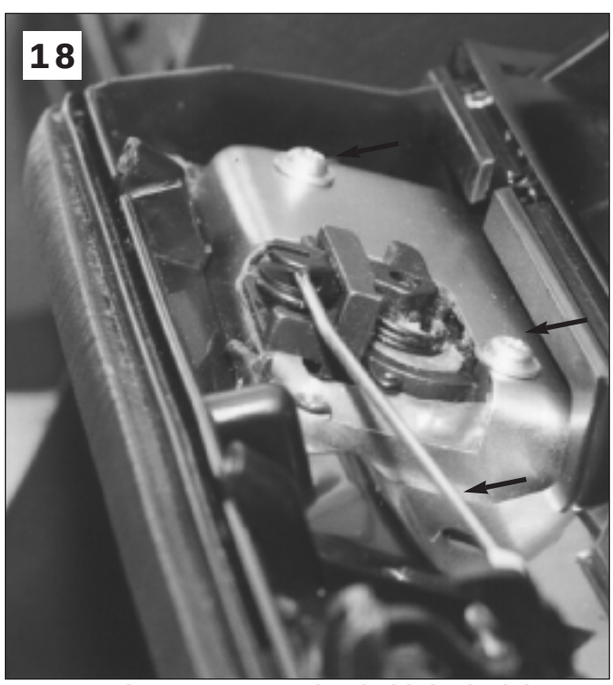


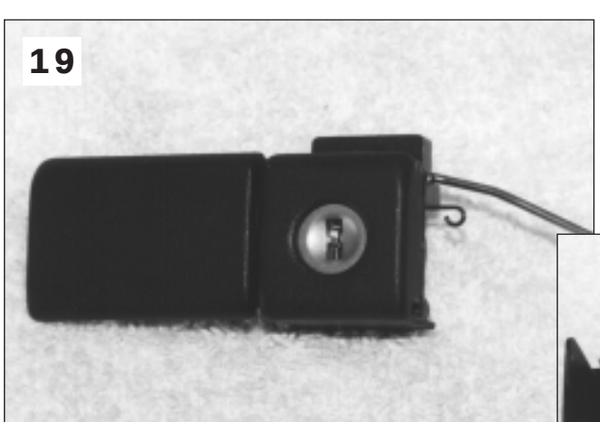
The plug can now be removed from the shell. The trunk cylinder contains tumblers in positions 1 through 8. The first four tumblers are solid, the next three are split and the last one is a solid tumbler.

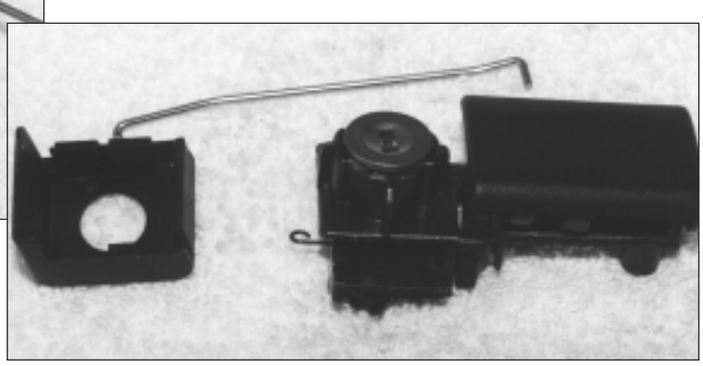


Photograph 17 is a view of the glove box lock. Open the glove box and remove the back cover to gain access to the lock.



Remove the two screws that hold the lock in place and disconnect the small linkage rod to remove the lock.





Remove the plastic cap on the front and the linkage rod.

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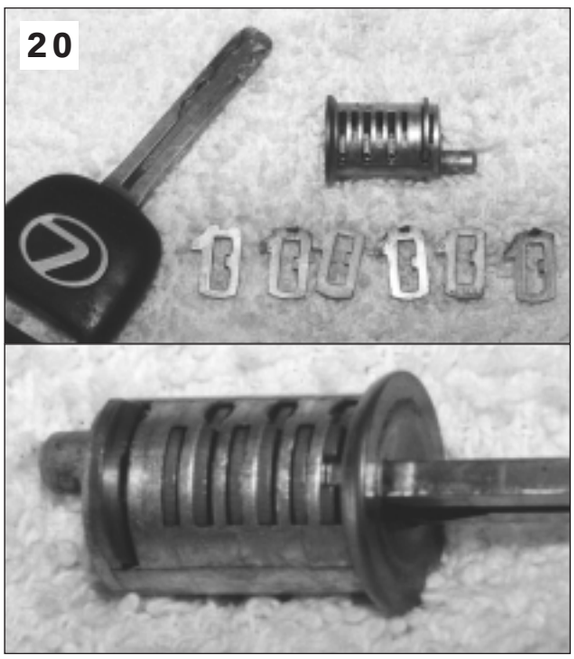
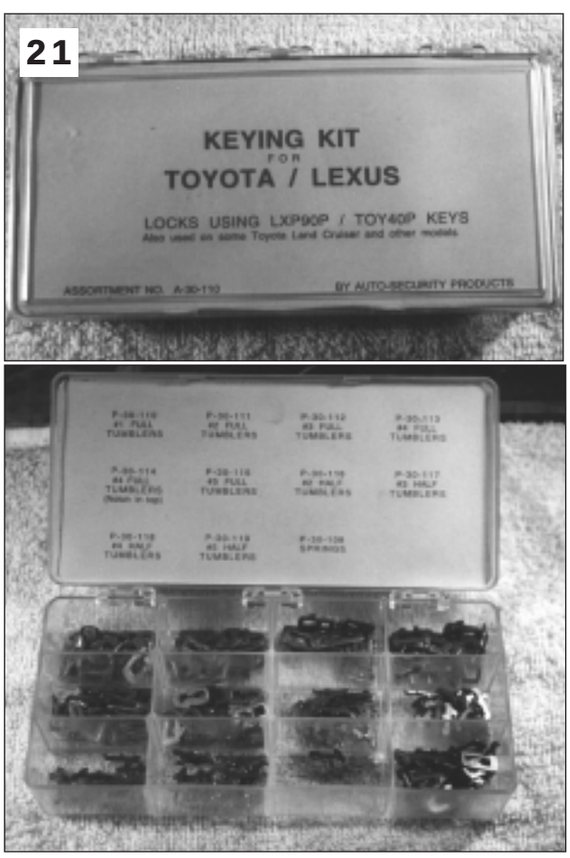


Depress the spring tumbler retainer and slide out the plug. The glove box uses all solid tumblers in positions 3 through 8.



The Auto-Security Products pinning kit #A-30-110 contains all the tumblers used in the locks. The tumblers are stamped with a depth number. A number 5 depth is a shallow depth and a number 1 is the deepest depth.

Lexus Deck Lid Release Notes

•**ES250** — Manual release lever near left side of drivers seat.

•**ES300** — Push in button on drivers door panel, on-off switch located in glove box.

•**GS300, LS400, SC300 & SC400** — Flip-button and valet key lock-out switch located on left lower side of dash panel. By lowering the panel you can reset the valet lock by pushing in on the detent on the side of the lock housing, this detent may be hidden under a large wire clip that encircles the housing of the lock.

Making First Key

Cutting and/or generating a Lexus key requires a high security key machine and code attachment.

Before cutting a key, remember these facts about the Lexus keying system:

1. All tumblers are numbered, but are reverse of normal depths, a number 5 is a shallow cut and a number 1 depth is the deepest cut.

2. Tumbler position 8R is always a number 4 depth for the master key, and a number 2 depth for a valet key. This is the only difference between a master and a valet key.

3. Tumblers 4L and 8L are not used in any locks, but must follow MACS (So the key works smoothly). To make cutting easy, cut these to a 3 depth.

4. Because of the tolerances of the center groove you cannot have a number 5 depth on the left track opposite a number 4 or 5 depth. Doing so doesn't allow enough room for the key to pass down in the keyway of the lock. (and visa-versa).

Method #1. If possible remove trunk lock and disassemble and decode, otherwise remove the valet lock-out cylinder and disassemble and decode.

Impression remaining positions 1L, 2L, and 3L in the ignition. (It helps to use a lighted 10x magnifying glass.)

Method #2. If possible remove trunk lock and disassemble and decode, otherwise remove valet lock-out cylinder and disassemble and decode.

Create a MACS chart and progression cuts 1L, 2L, & 3L in the ignition.

Trouble-Shooting

Keys Locked In Trunk

You unlock the car, but the Valet-Lockout cylinder is locked. You will have to get to the back of the Valet-lockout cylinder by lowering the bottom portion of the drivers side dash. On the back side of the cylinder is a wire clip that partially wraps around the cylinder. Remove the clip and depress the plastic retainer, the cylinder will then pop-out to the unlocked position.

The Valet-Lockout Cylinder Is Unlocked But The Trunk Does Not Open

The reason for this is the factory alarm system has shut down certain operations of the on-board computer. If you close both doors, the alarm will re-lock them. To turn the computer back on, you will have to reset the alarm. To do this, remove either door panel, follow the two or three wires off of the door cylinder to where they meet at the snap-connector. Unsnap the connector and jump the leads until the alarm resets. Usually you cannot hear when the alarm resets. Now you will be able to activate the electric trunk release switch.

Tumbler Positions

LEFT	Tip	RIGHT
X	8	T G
T D	7	I D T G
T D	6	I D T G
T D	5	I D T G
X	4	I D T G
I	3	I D T G
I	2	I D T
I	1	I

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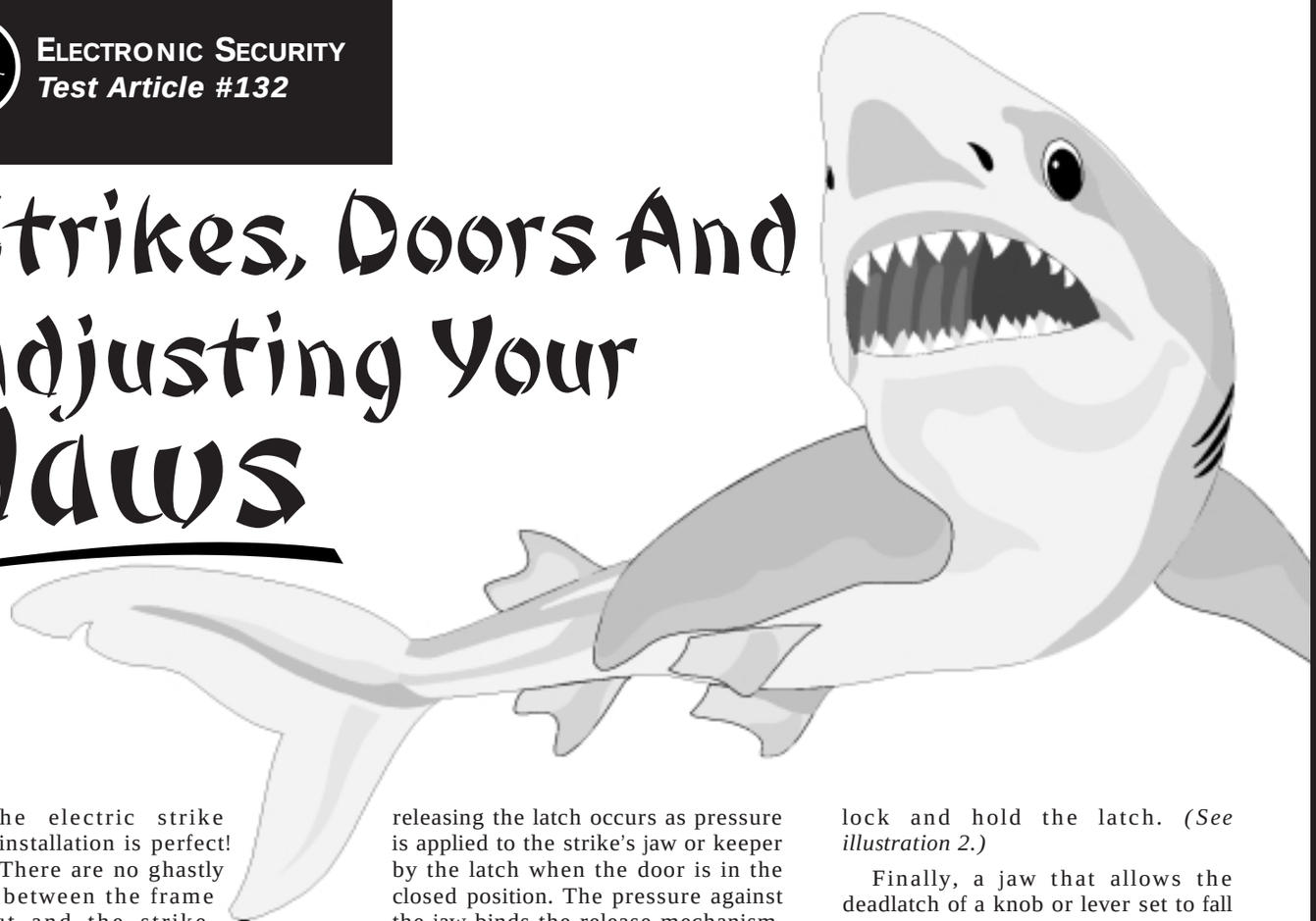
Strikes, Doors And Adjusting Your Jaws



The electric strike installation is perfect! There are no ghastly gaps between the frame cutout and the strike body or faceplate. The faceplate sits flush with the frame. The wire run was easily accomplished and the termination was neat and clean. The door swings shut, and ... oh, darn!

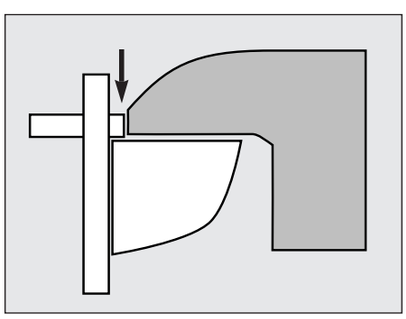
This, unfortunately, is not an unusual scenario for an electric strike installation. Despite making an extraordinary installation, the unit does not work properly when the door is shut. Some of the common problems include a binding strike that does not release the latch, a strike that does not catch and secure the latch, and a closed door whose latch is easily probed because the deadlatch is not properly positioned.

In a properly latched door, the latch of the knob or lever set extends fully behind the jaw or keeper of the strike. Little or no pressure is applied against the jaw by the latch. The deadlatch, on the other hand, rides or sits on top of the jaw and remains depressed. While there may be some play between the latch and jaw, there should never be enough to allow the deadlatch to fall into the keeper area. (S*ee illustration 1.)*

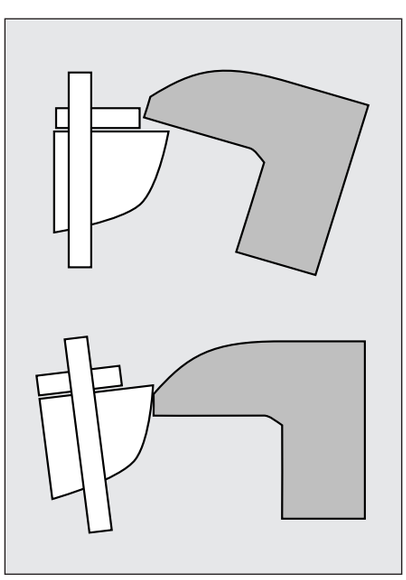
The strike binding and not releasing the latch occurs as pressure is applied to the strike's jaw or keeper by the latch when the door is in the closed position. The pressure against the jaw binds the release mechanism. Consequently, the solenoid or coil is not strong enough to retract the release mechanism, therefore, not releasing the jaw and the door latch.

Not catching and securing the latch occurs when the horizontal alignment of the jaw does not let the latch to properly enter and latch behind the keeper. Also, under such conditions, if the door slams or is closed hard enough for the latch to fall behind the keeper before the release mechanism relocks the jaw, the latch may raise the jaw to a position where it cannot lock and hold the latch. *(See illustration 2.)*

Finally, a jaw that allows the deadlatch of a knob or lever set to fall into the keeper occurs when the jaw is not positioned correctly. *(See illustration 3.)*



1. A properly adjusted strike allows the latch to fully enter the keeper while the deadlatch is positioned on top.



2. Doors that are not operating correctly often do not allow the latch to correctly or fully enter the keeper. The result is the jaw being held open or the door not latching at all.

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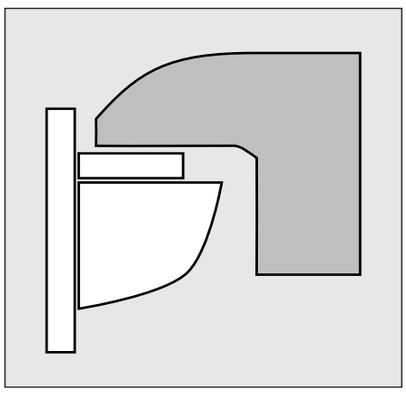
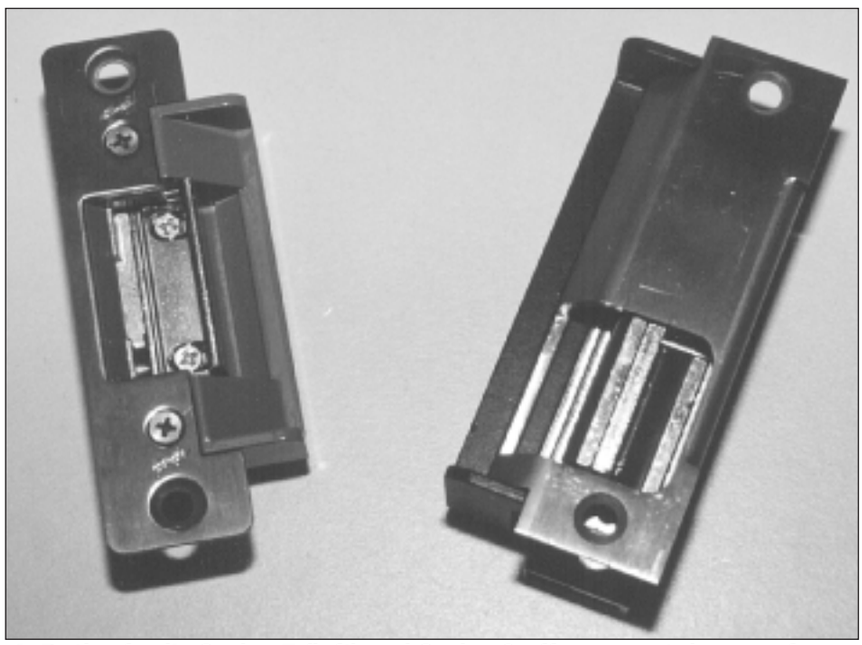


3. On the other end of the spectrum, a jaw that allows the hole latch and deadlatch to enter the keeper makes this lock easy prey to probing.



4. Rutherford's Series 7 (left) and Series 2 offer a great degree of lateral jaw movement to help offset the effects of a badly operating door system.

Despite the variety of problems we just listed, there is typically one cause — an incorrectly hung or operating door and frame. Using a standard strike plate, door problems are often hidden or ignored. If the door suffers from hinge bind or hinge sag, has a badly adjusted door closer, rubs against a threshold or frame, is not in the same plane as the frame, etc., the door can still be closed, latched and locked. Subsequently, they are not recognized as problems. That is, until an electric strike is installed. It's at this point that a correctly working and aligned door is critical to the operation of that door system.

Unfortunately, many installation problems are either diagnosed too late (after the strike has been installed) or

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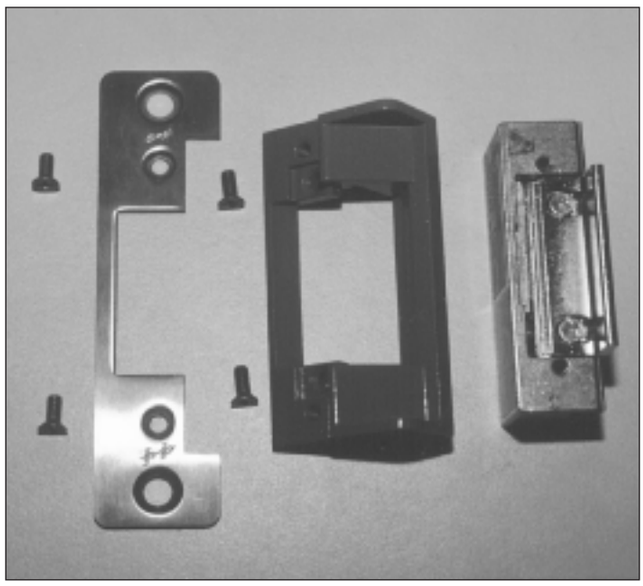
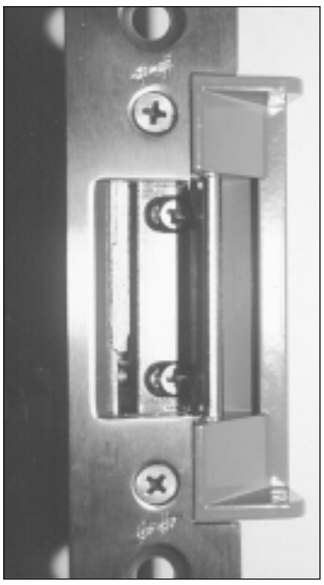


5. The Series 2 is broken down into three components: faceplate, lip bracket, and coil unit.



6. Loosening the two screws allows the jaw to slide horizontally, allowing up to 1/8" in adjustment.

cannot be solved without a great deal of added expense to the customer. Neither of these are ideal conditions for a locksmith or for the customer.

The fortunate side to the electric strike coin, however, is electric strikes with an adjustable jaw. These units, although limited in the past, are now produced by various manufacturers for a variety of applications. It should be noted, however, that in some cases there is a trade-off. In many cases, in order to provide for an adjustable jaw, some strength to the jaw is sacrificed. As this is not true of all styles or models, make sure and match the requirements of the door system you're working on with the strike

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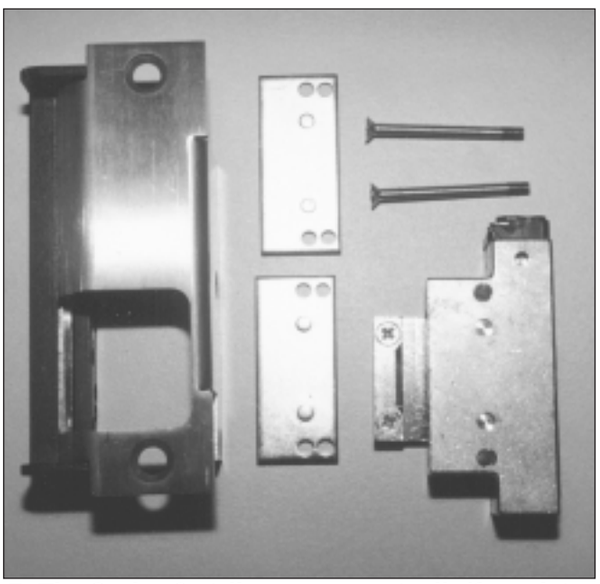
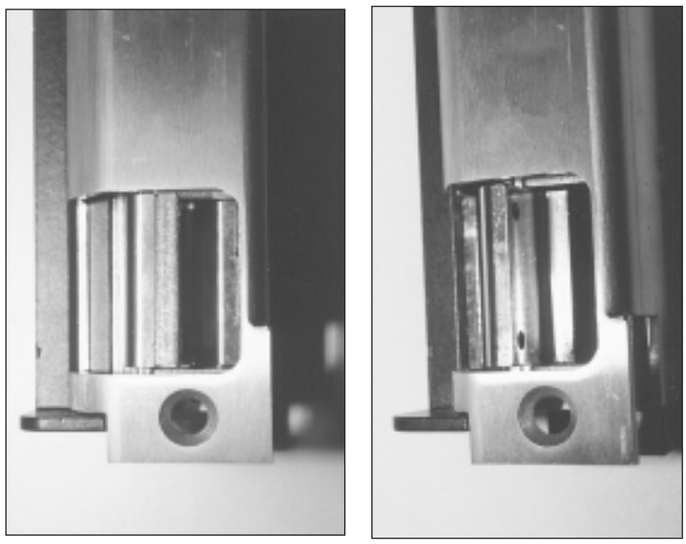


7. The Series 2 strike components: lip/faceplate assembly, coil unit, and shims.



8. Two shims and a split pivot shim allow for up to a 3/8" lateral slide on this jaw.

offering the correct specifications.

To get a better idea of what the adjustable jaw strike offers, let's look at a couple of strikes manufactured by Eff, a German exporter of electric strikes and locks, and currently distributed to North America by Rutherford Controls.

The models we will briefly cover included the 7 Series for standard cylindrical style knob and lever sets, and the 2 Series for mortise locks and mis-aligned cylindrical locksets. It should be noted that the 2 Series was not designed specifically for allowing lateral movement to the jaw, but rather for fitting a wider variety of hardware applications. However, due to its design, there is enough lateral jaw adjustment for it to be considered. *(See photograph 4.)*

The Series 7 strike we will look at is the model 7104. This unit comes broken down into three distinct

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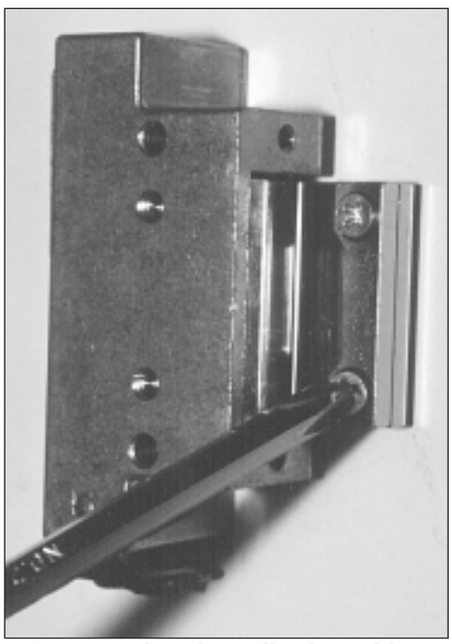
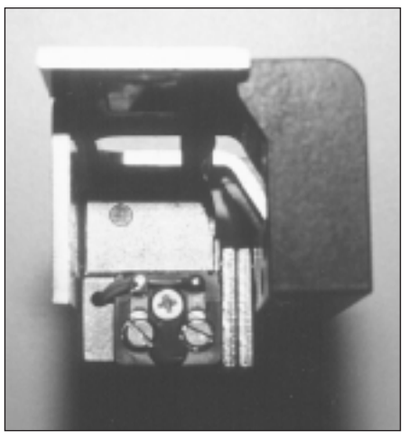


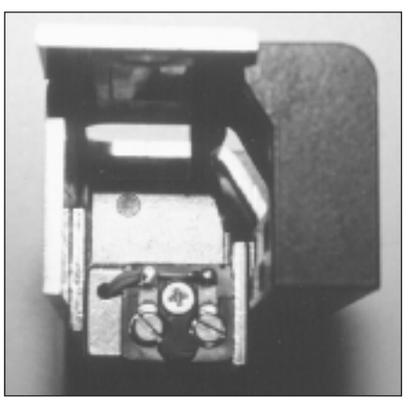
9. Removing the split pivot shim from the jaw to make the necessary adjustment.

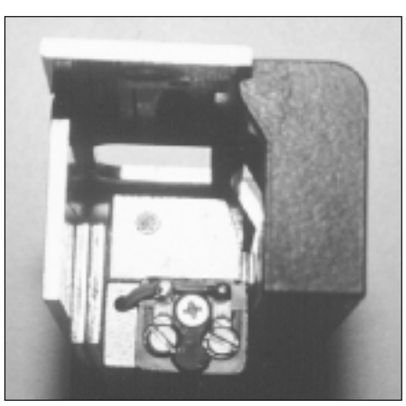
components: faceplate, lip bracket, and coil unit. *(See photograph 5.)* The adjustability of this unit is integrated into the jaw and coil unit. To adjust, simply loosen the two screws holding the jaw to the coil unit. Slide the jaw into the desired position and tighten the screws. There is approximately a 1/8" lateral slide available for adjustment, suitable for most trouble installations. Vòila, it's done. Check the door and latch for proper operation. *(See photograph 6.)*

The Series 2 strike we will look at is the model 2134LH. Like the Series 7 strikes, the Series 2 is broken down into several components: lip/faceplate assembly, coil unit, and shims. *(See photograph 7.)* Unlike the Series 7, the Series 2 does not provide lateral jaw movement via an adjustable jaw. Instead, adjustment is accomplished through the addition/removal of a "split pivot shim," a piece of metal attached to the jaw, and the placement of the coil unit and the two shim plates. Total lateral movement on this unit is approximately 3/8". *(See photograph 8.)*

How you adjust this unit is dependent on many factors including lock type and how much lateral movement is required. If removing/attaching the split pivot shim, it must be done before the coil unit is attached to the lip/faceplate assembly. *(See photograph 9.)* Or, using the two shims, the coil unit can be adjusted into one of three positions. *(See photograph 10.)*







10. Using the shims to effect the lateral movement of the jaw.

While it's always best to correct door/frame problems before installing an electric strike, as locksmiths, we know that this is not always possible. And, as seen, these two Rutherford strikes, as well as others, can provide the locksmith with some latitude in handling a strike installation where the door/frame are not operating exactly perfect. TNL

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Servicing the Schlage A53 PD Entry Lock

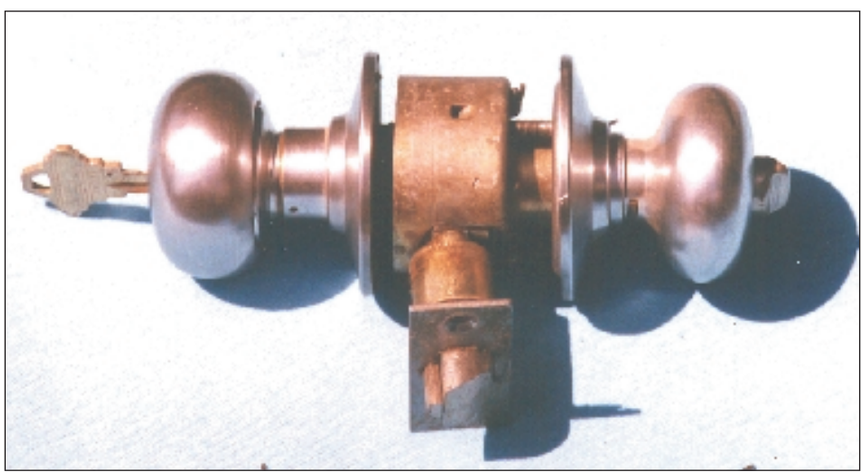
by Jim Langston

A Schlage A53PD is a very common entry lock. To rekey the lock is actually quite simple. First take the key that operates the lock and insert it into the cylinder *(Photograph 1.)* Turn the key clockwise, and with a small piece of wire, push the retainer on the side of the knob inward *(Photograph 2.)* With the wire pushed in, pull out on the knob to release it from the housing. Once the knob has been removed, take the back cover plate off the knob and remove the cylinder.

Using the same piece of wire used to depress the knob retainer, depress the retainer pin on the back of the lock plug *(Photograph 3.)* Unscrew the cylinder cap from the lock plug and remove it. Now, with the operating key in the cylinder and turned, place a following tool on the back of the plug and push the plug out of the cylinder *(Photograph 4.)* Rekey the plug to a new combination bitting then reverse the order used to disassemble the cylinder to reassemble it.

If you do not have a key for this knob and you can't pick it open or impression a key for it, you can disassemble the lock to remove the lock cylinder and then make a key or rekey it. To do so, first remove the cotter keys from both sides of the locks mechanism housing cover *(Photograph 5.)* Then remove the housing cover by sliding it off *(Photograph 6.)*

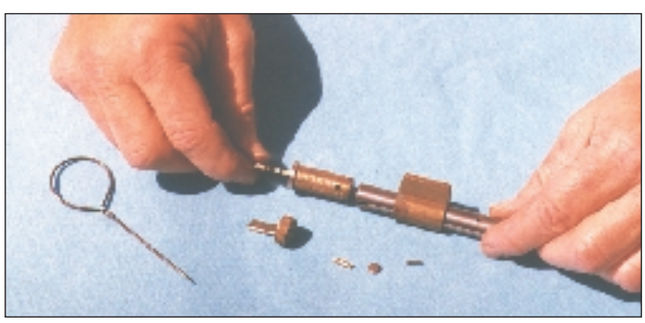
With the housing cover removed, bend the frame retainer post out slightly to remove the back of the inner knob shaft *(Photograph 7.)* To remove the inner knob shaft, place your finger on the latch slide mechanism and push it in. Then grab the inner knob shaft and pry it out *(Photograph 8.)* The inner return springs will also pull with the inner knob shaft *(Photograph 9.)* With the inner knob shaft removed you can then remove the cam inside the spindle *(Photograph 10.)* All the



1. First take the key that operates the lock and insert it into the cylinder.

2. Turn key and with a small piece of wire, push the retainer on the side of the knob

3. Depress the retainer pin on the back of the lock plug.



4. Place a following tool on the back of the plug and push the plug out of the cylinder.

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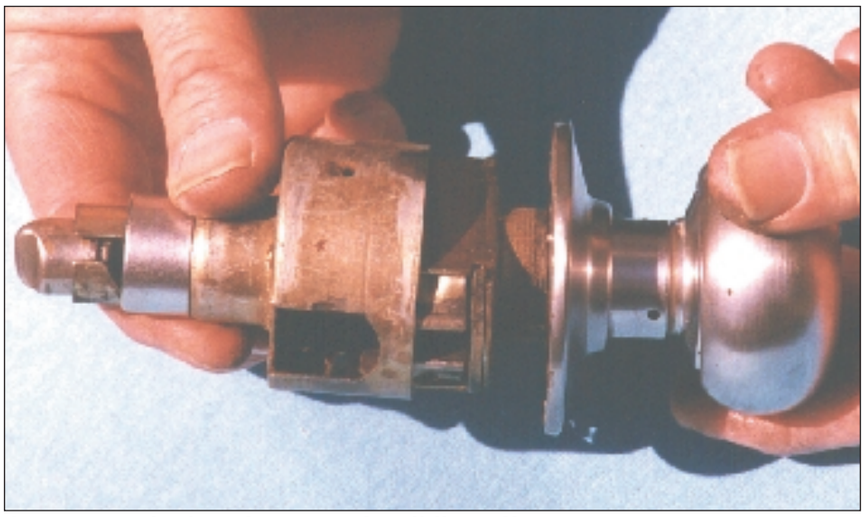
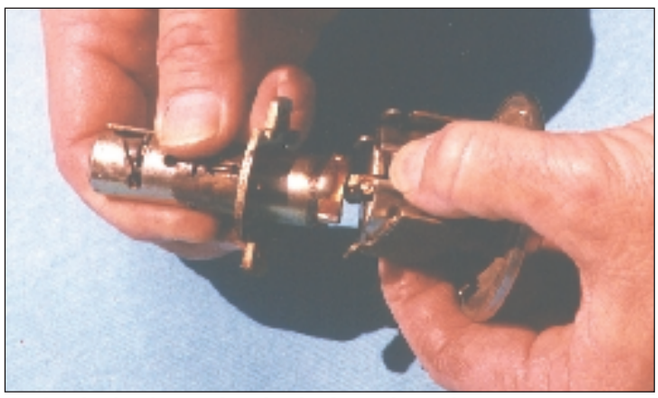
5. First remove the cotter keys from both sides of the locks mechanism housing cover.

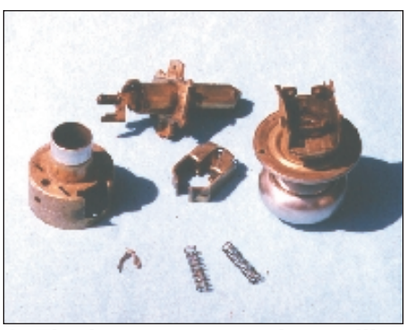


6. Remove the housing cover by sliding off.

7. Bend the frame retainer post out slightly to remove the back of the inner knob shaft.



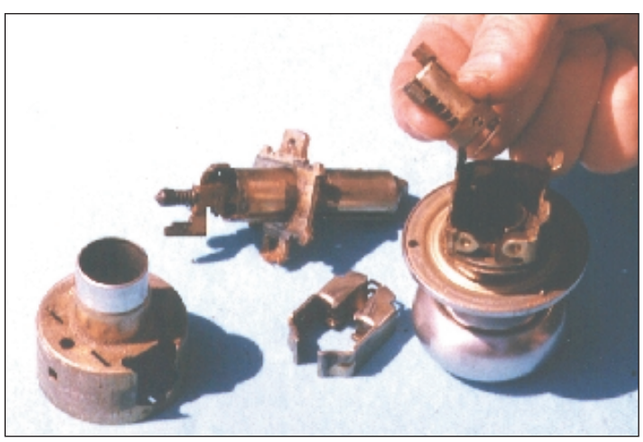
8. Grab the inner knob shaft and pry it out.



9. The inner return springs will also pull with the inner knob shaft.

components that were disassembled can be seen in *Photograph 11*.

At this point you can see the knob retainer and tailpiece of the lock through the spindle opening. To remove the knob and lock cylinder, you must first turn the rigid tailpiece one quarter turn counter-clockwise. The knob retainer can not be depressed to remove the knob without turning the tailpiece first.



10. With the inner knob shaft removed you can then remove the cam inside the spindle.

To turn the tailpiece, use a thin piece of stiff wire approximately three inches long and place it on the retainer pin at the back of the lock cylinder plug. Depress the retainer pin with the wire then reach in and turn the tail-piece counter-clockwise using a pair of needle nose pliers *(Photograph 12.)* With turning pressure being applied to the tailpiece, remove the wire from the retainer pin. The tailpiece should then turn, allowing enough clearance for the knob retainer to be depressed, and the knob and cylinder removed to service. With the cylinder out, you can now shim it and rekey the lock.

To reassemble the lock, first insert the cam back in the spindle opening and install the latch slide with springs back in the lock body. To put the inner knob plunger back in the lock,

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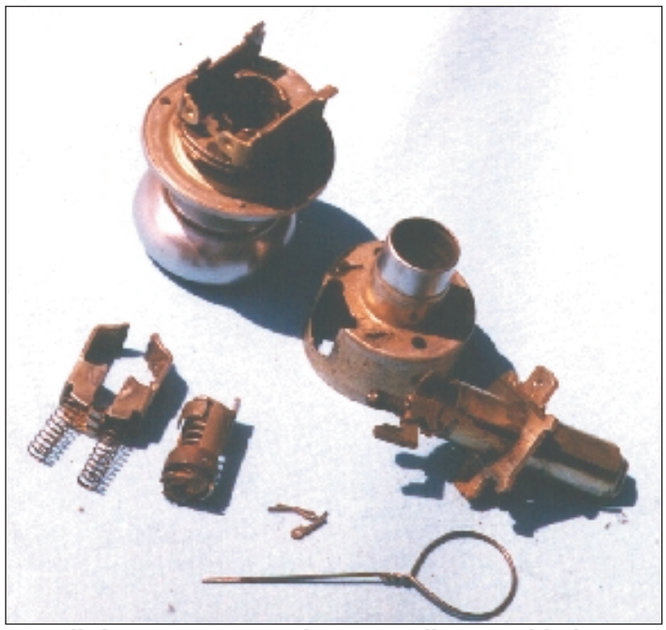
you will need to depress the latch slide mechanism to properly seat the plunger. With that much assembled, replace the back plate and straighten up the housing retainers. Next install the housing cover and cotter pins to secure the assembly. The lock mechanism should now be reassembled. You can now replace the knob and lock cylinder by sliding it on as far as it will go. Insert the operating key into the cylinder, turn clockwise, depress the knob retainer and push the knob until it is completely seated and the retainer snaps in place. The job is now complete and the knob reassembled*(Photograph 13.)*



11. All the components that were disassembled can be seen.

The Schlage A53PD is an entry lock set you will frequently encounter. It will be to your benefit if you thoroughly understand the design and service procedures of this unit. At first it may seem complicated, but after a few tear downs, you will find it is actually quite simple.

12. Depress the retainer pin with the wire then reach in and turn the tail-piece counter-clockwise using a pair of needle nose pliers.

13. The job is now complete and the knob reassembled.

Points to Ponder: If judges really want to be harsh on criminals, they should assign them jury duty.

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COVER STORY!

DEADBOLT DEMOLITION!

by Dale Libby

About a year ago, we at *The National Locksmith* mounted and attacked deadbolts with our feet and a fork lift. The results told us a lot about door and strike security. This year we will kidnap some poor unsuspecting deadbolts, and carry them kicking and screaming into our Locksmith Torture Test Lab to attack the locks themselves within a few narrow protocols.

The attack sequence used on the deadbolts included in this article is a compilation of attack methods commonly used to try and defeat such locks. They include picking, punching, probing, and drilling. I will mention some more cogent techniques at the end of the article.

Here are the guidelines used when working on the following locks:

1. Picking includes 10 minutes of professional picking. If I cannot pick a lock in that time, I go on to more advanced and destructive methods to open the deadbolt.

2. Punching is done with a sharp pick type hammer. One end was used to bash the deadbolt, and the pick side is used to knock off the cover of the deadbolt which will expose the ends of the mounting screws.

3. Drilling is done with a fully charged Makita 3/8 inch battery operated drill and a sharp 1/4 and 5/16 inch drill bits. Drilling can be done either at the shear line of the cylinder where appropriate, or on the ends of the mounting screws to loosen the lock or to drill out/off the mounting screws. Drilling can also be used to open a hole above the deadbolt to expose the bolt mechanism.

4. Probing is the use of an ice pick to try and flip the inside deadbolt to the open position. Drilling above the deadbolt will expose the "Crescent of Opportunity" by loosening the deadbolt from the door.

Deadbolt Theory

The purpose of a deadbolt, like a safe or money chest is to buy the customer time. It is not to provide impregnability. If someone wants in a door bad enough, they WILL get in eventually. If time and noise is of no importance, then the door or deadbolt will eventually be defeated.

Let us go on to the actual attacks. I am not stupid. If I know an attack will fail, I will NOT proceed with it. I do not get my jollies by futile effort. I learned a lot when I started working on these units. You will see that High Security means a lot more than just NOT being able to get the keys duplicated, although that is part of the system too.

Defiant Deadbolt

The first unit is a low cost lock made in Malaysia with many options. Called the Defiant, it is easily set for either 2-3/8" or 2-3/4" backset. It is easy to rekey and uses the standard .115 size pins. It has a 1 inch throw and is easily installed. It also offers NO security from any of my attacks.

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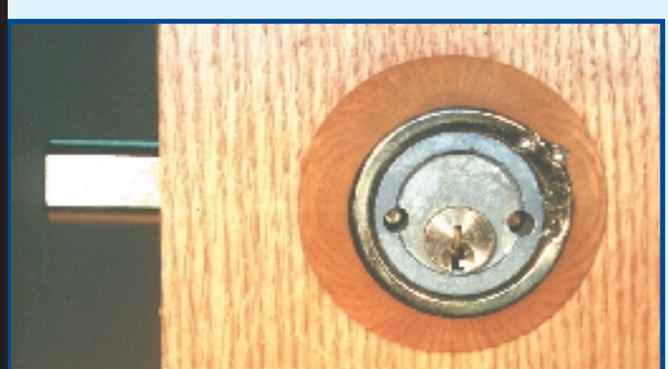
The Picking attack was incredible. About three seconds. The lock comes with tapered top and bottom pins which offer no resistance to a picking attack. Put the tension tool in, rake twice, and the lock opened.

The punching attack was easy too. With three or four hits of the pointed hammer, the outer cover fell off exposing the two screw ends *(see Photograph 1)*.

The next attack consisted of penetrating the ends of the exposed mounting screws with a Makita drill. This serves two purposes. You can either drill out the screws to let the front cylinder fall out of the housing, or you can use the drill to unscrew the screws holding the lock *(see Photograph 2)*.

As I drilled, the inside mounting screw began unscrewing. Once both sides of the lock are loose, it is possible to insert an ice pick in the "Crescent of Opportunity" (deadbolt actuator) as shown in *Photograph 3*. An ice pick can be inserted into the top of the deadbolt to withdraw the bolt. A hole could be drilled above the lock to let the ice pick in as well.

Every one of my methods to defeat the Defiant lock worked easily, too easily as it turned out. This lock is sold at home centers, and as our Torture Tests revealed, the lock is worth about as much as we paid for it, about eight bucks. Of course, the danger to the consumer is that the Defiant looks just as shiny and new in its blister packaging as does a high quality lock costing much more. This is certainly a case of you get what you pay for. We must educate the customer as to what constitutes a good or a poor deadbolt.



1. (Above) The Defiant cover plate easily pops off with a few hits of a pointed hammer exposing the ends of the mounting screws.

2. (Below) Drilling out the exposed mounting screws on the Defiant with a cordless drill.

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3. An ice pick can be inserted into the "Crescent of Opportunity" (Deadbolt actuator) to probe the bolt into the open position.

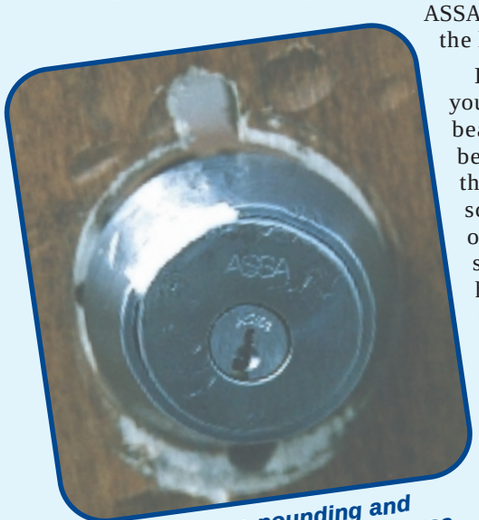
4. ASSA deadbolt prior to installation. Note probe cover over the bolt actuator and 1/4 inch mounting screws.

The next two deadbolts covered are made in Europe and Israel. Both use a common type of mounting system and the same exact deadbolt bolt, with minor modifications; the tailpiece brackets are a little different. One of the bolts was stamped with the name Abloy. It was the same as the other.

ASSA Deadbolt Test

The ASSA deadbolt is shown in *Photograph 4*. There is a probe guard to defeat the ice pick. The lock is held together with two 1/4 inch high tensile strength black steel bolt cap screws. These are installed with an allen wrench and torqued tight.

There was no use drilling for the end of the bolts, for as we will see, the ends of the bolts are protected by hardened steel ball bearings. In fact, the rest of the deadbolts in this article are covered and protected by ball bearings. Some them you have to install yourself, and others, like in the ASSA are pre-installed in the lock by the factory.



5. After some pounding and hammering, the ASSA lock was only slightly marred, but was not compromised in any way.

If, by some reason, you could get the ball bearing out, it would be very hard to drill the mounting cap screws with a battery operated drill. After some pounding and hammering, the lock was only slightly marred, but was not compromised in any way. *(See Photograph 5)*. In the end, I was NOT able to defeat this deadbolt with the tools used.

Mul-T-Lock Attack

The Mul-T-Lock deadbolt is similar to the others with a few interesting adaptations which can be seen in *Photograph 6*. First is the high security dimple key. The second is at the end of the bolt, there are two ball bearings that pop out when the bolt is extended. This has the function of interlocking the bolt with the high security armored strike. This, in theory keeps the door from being pried open with a pry tool.

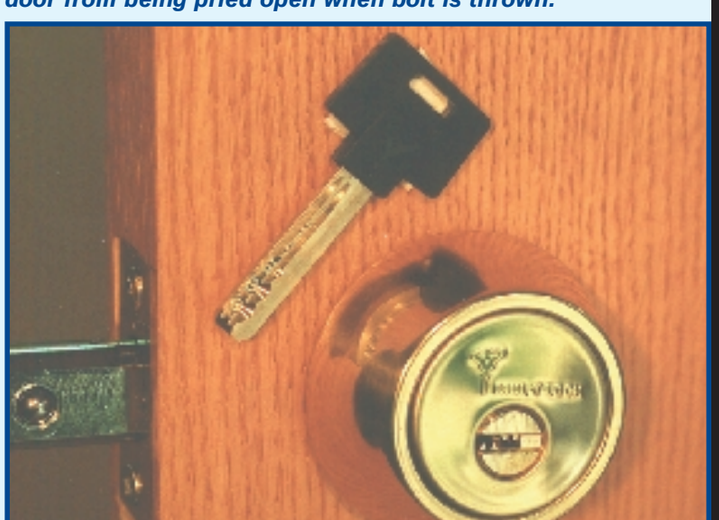
In *Photograph 7*, we again see anti-probe shields and the 1/4 inch mounting bolts. Since this is a double cylinder lock, there are a couple of interesting refinements. First, there is a plug for the end of the cap screw. This is like a shear head plug. You drive the plug into the screw after installing the lock and hit down on it. The head of the plug then breaks off leaving the top flush with the screw.

In this same photograph can be seen the cylinder with three hardened pins inserted to keep from drilling the shear line and opening the lock. Off to the right of the cylinder are two ball bearings that are installed at the base of the cap screw holes.

All my attacks, including picking, were thus defeated before I began.

Again, I will not try an opening with only a battery operated drill if it is doomed to failure without special tools. At this point, I decided that it was only fair for me to hammer on the Mul-T-Lock, but I am ashamed to admit that despite my best efforts in the Test Lab, I could only slightly mark the finish *(see Photograph 8)*. Blows which totally destroyed the Defiant glanced off this lock.

6. The Mul-T-Lock incorporates a few unique features such as a dimple key to operate and ball bearings in the end of bolt that interlock with the strike to keep door from being pried open when bolt is thrown.



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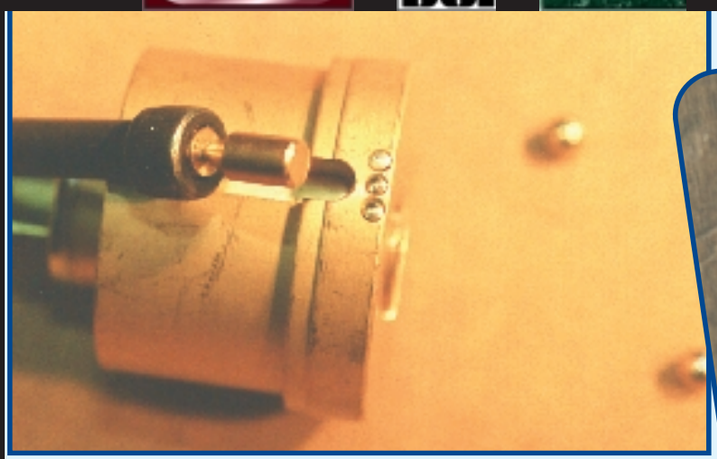

7. Shear head cap screws, ball bearings and hardened pin inserts at the shear line are standard features on the Mul-T-Lock Deadbolt.

8. I am ashamed to admit that despite my best efforts in the Test Lab, I could only slightly mark the finish on the Mul-T-Lock.

MIWA Deadbolt

The MIWA deadbolt has a couple of interesting features, and is lacking one important high security characteristic. I installed the MIWA deadbolt in my "PROBING MOUNT." This is just a mount that had a lever lockset mounted correctly on it. I just enlarged the holes at 12:00 and 6:00 to allow for easy probing of the mounted deadbolt.

Photograph 9, shows the special tool (bent paper clip) that is incorporated to remove the front cover of the lock. Just inset this clip and push down the spring loaded pin and the front cover pops off. This is for installing the lock and for removing the lock.

Photograph 10, shows the lock with the operating key installed. It also lets you see one mounting screw hole and a large ball bearing that protects the end of the other cap screw.

With this double cylinder deadbolt, a mounting screw is installed from either side of the lock, reminiscent of older type deadbolts in the United States. One screw is installed from each side of the lock to hold it in position.

The one thing that this lock does NOT have is an anti-probe guard. That is why I installed it in the probing fixture. *Photograph 11*, shows the bolt being pulled back with an ice pick. This lock is supposed to be installed in a 1-1/2 inch hole, so in real life, you could use your drill to penetrate to the bolt cavity and pry it back that way.

MIWA has an interesting concept for master keying. It is done on the key and not in the cylinder. The keyway has no inner moving parts, so it is resistant to super glue attacks. An anti-picking guard should be included. Most lower priced

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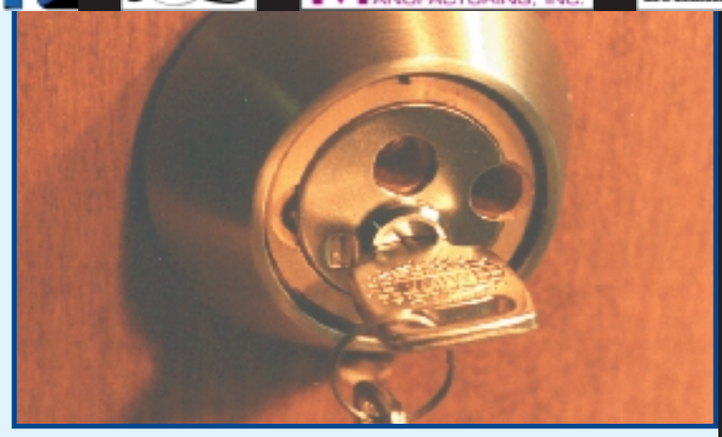
9. The MIWA magnetic key operated deadbolt installed on a probing fixture.



10. To masterkey a MIWA lock, it is accomplished on the key, not in the lock.

deadbolts now use this innovative piece of equipment to protect against probing.

I did not use the smash attack on the MIWA lock, but it would have resisted the attack.

Medeco Maxum Deadbolt Attack

The Medeco Maxum with Key Keeper incorporates all the previous High Security features with additional hardened steel inserts to thwart drilling and ball bearings to protect the ends of the cap screws. *Photograph 12*, shows the deadbolt before installation. Note the anti-probing features on the outside cylinder at the right of the picture.

Photograph 13, shows the key keeper with the cut down key with the slot in the bottom. With this deadbolt, it can be either a single cylinder or a double cylinder model. When the key thumb turn is inserted, the unit is locked into the inside cylinder and cannot be removed without turning the outside cylinder a quarter turn either to the right or left. A very good concept.

When the Medeco lock was assembled and installed on the probing mount, the deadbolt bolt is protected from ice pick probing and the mounting screws are covered with ball bearings to prevent a drill attack.

11. A successful probing opening was accomplished on the MIWA lock because the deadbolt actuator is not protected by a guard.

After installing the Medeco, two small chrome ball bearings are pounded into the back of the lock just prior to putting on the inside trim plate. How does one get the ball bearings out? I have no good idea, but they protect the screws from being backed out.

By this point, I felt like I had to uphold the honor of The National Locksmith Torture Test Lab by working the Medeco over with a hammer *(See Photograph 14)*. As you can see, although I put my weight into the job, I failed to compromise the unit. A little marking is to be expected, but blows which caved in the Defiant, left the Medeco unscathed.

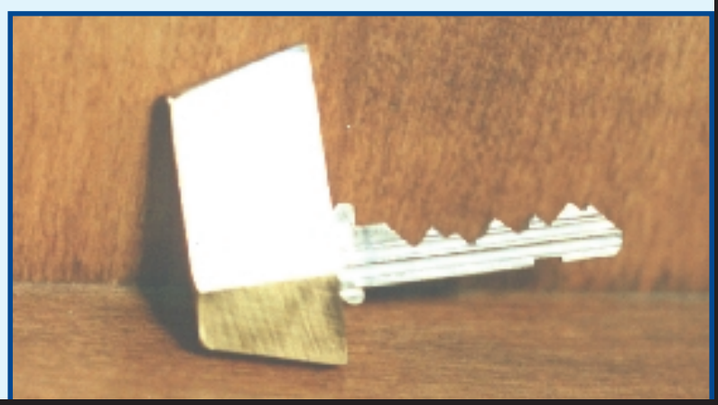
Conclusions:

All the locks, except the Defiant, were impossible to pick. When all the locks and their appropriate strikes are installed correctly, using the extra long screws, they will withstand a moderate kicking attack. Using the tools that I usually employ to open locked deadbolts, the locks were safe. Was this a fair test? I think so.

There is a place for High Security Locks, but there is also a hefty price to pay. Most customers for deadbolts still like to get the most they can for as little as possible. It is our job, as security professionals to balance the level of protection needed with what the customer can afford. With commercial accounts, the best is the best and is the most expensive. Sell the best.

12. Components of the Medeco key keeper deadbolt. Note the anti-pry metal shroud at the rear of the outside cylinder housing.

13. Picture of the key keeper cylinder key with notch at bottom of key. Once inserted, this key can only be removed with outside key.



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14. By working the Medeco over with a hammer, you can see, although I put my weight into the job, I failed to compromise the unit.

How did I get through the occasional High Security deadbolt where there is no other option or other door to go through? I use heavy duty tools including a die grinder with cut off wheel, a high speed electric drill with carbide hardplate bits, a 7 inch Milwaukee grinder, and a Dremel Moto Tool. With the above tools, the ball bearings that protect the cap screws can be defeated (eventually) and the shear lines, or the cylinders themselves can be drilled out.

I treat an opening like this as a safe opening. Time, tools, and knowledge will defeat anything. When it comes to high security deadbolts, you will need a little more time, a few more tools and a greater knowledge of the product design to overcome. High security deadbolts do what they were designed to do, they buy time.

As for me, I am not sure I wasn't set up for a fall by the ultra-secret team in charge of setting up the Locksmith Torture Test Lab procedures. After all, they suckered me in with one easy lock, and the rest proved to be Libby-resistant. Now, where does Marc keep those forklift keys? Wait! Let me get my picks!

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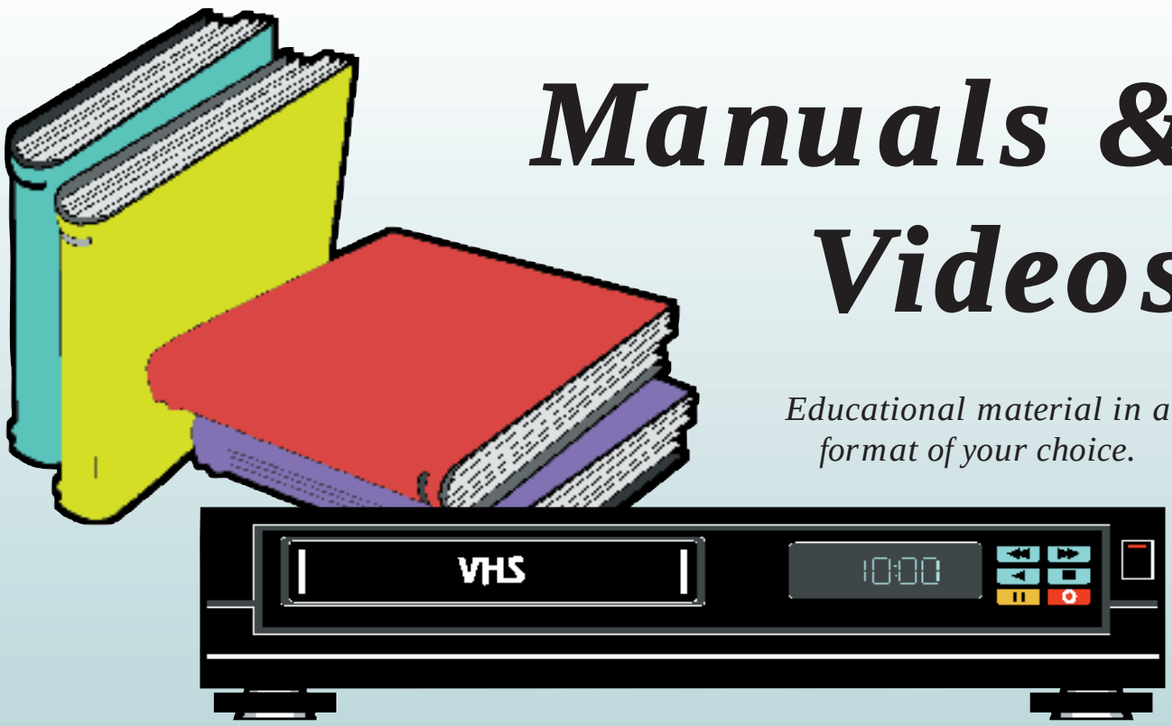

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The all new 4 volume 1,700 page encyclopedia includes a new Information Volume; Two new Field Volumes (domestic & imported); and a Service Volume, with every car opening covered by professional illustrations and instructions for quick, trouble free access. The Information Volume gives complete lock specs for each vehicle, including key blank numbers and space and depth information. The Service Volume offers step by step instruction for rapid disassembly and re-assembly of steering columns, including those equipped with air bags. *Contact High Tech Tools at: 1-800-323-8324 for more information.*

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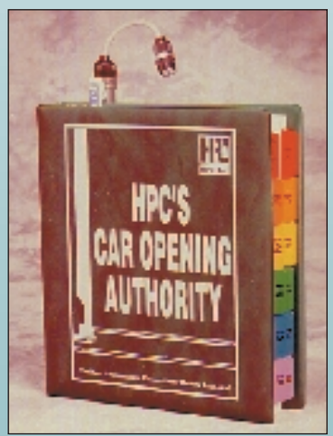

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Would you like to be able to service practically any foreign ignition, door, trunk, or glove box lock? You can do all this and more with the Foreign Automotive Lock Serving Series! Written by Pro-Lok's own in-house experts, this series is the most comprehensive series of auto lock serving in books ever published. Each manual is classified by manufacturer, with most major manufacturers supported. That means that you will be able to find the solution to your particular application quickly and easily, without having to sort through a number of different books.

As of this printing, Honda, Nissan, Toyota and Mazda Manuals are available. Check with your distributor periodically to see which new manuals have been released. *For more information contact Pro-Lok at: (714)633-0681*

Slide Lock Tool Offers Technical Manual

Have you ever been to the job site, tools in hand, ready to unlock that vehicle, only to open your instruction manual to find that the model isn't even listed! Or the instruction you need is listed in volume one through three?

Slide Lock Tool Company's 8th Edition Technical Manual solves those problems and more. covering from the 1950s to 1996 models in one complete index, it's compact enough to fit in your glove box. Clear and concise instructions and illustrations - even the hand placements are accurate - perfect for the beginner and experienced lockout technician alike. *Call 1-800-336-8812 for more information.*

Slide Lock Tool Company's 8th Edition Technical Manual

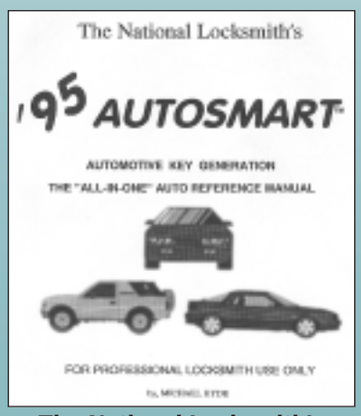
Tech-Train Offers Complete Library

Tech Train offers a complete library.

Offering a complete library of technical manuals for the professional locksmith, Tech-Train carries such books as: the original Hank Spicer books covering foreign car lock servicing and the newest HANKMAN series of auto service manuals; the Gerry Finch technical books including Masterkeying, I.C. Lock Service, and his famous book on Lock Picking; Jerry Levine's American Car Lock Service Manuals, Air Bag Steering Column Servicing; and his newest on the Ford 8-Cut locks; Masterkeying By The Numbers written by Billy Edwards as well as the popular Steve Young Quick Entry Car Opening Manual are just a few of the books offered by Tech-Train Productions. *For more information on the above books as well as others currently available, call: 800-356-0136.*

The National Locksmith Instructional Books

The National Locksmith offers a number of technical books covering a wide variety of topics. Written by experienced professional locksmiths, some of the more popular books are:



The National Locksmith's AutoSmart

AutoSmart by Michael Hyde. This is a comprehensive automotive reference manual which covers over 400 vehicles. Complete reference information for both foreign and domestic cars as well as key blank application and cross-reference; code and tumbler locations; space and depth specification; opening hints and key generation are just a few valuable pieces of information provided in this book for each vehicle covered. A wealth of information is covered within the covers of this 450 page encyclopedia. If you do automotive lock service work, this is a must have reference manual.

Penetration Party by Dave McOmie. The latest publication by this well known safecracker and writer, the book features four of McOmie's more recent Penetration Parties hosted in Minneapolis, Atlanta, Philadelphia and

Continued on page 58

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SRi SECURITY RESOURCES INC. | NATIONAL AUTO LOCK SERVICE, INC. | STRATTEC | ASP | HPC | Major MANUFACTURING, INC. | The National Locksmith

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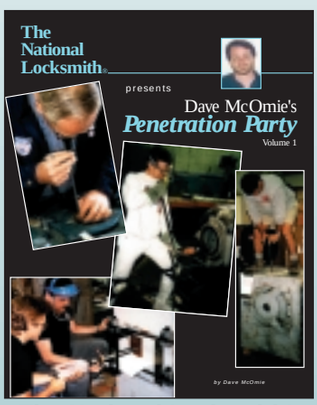
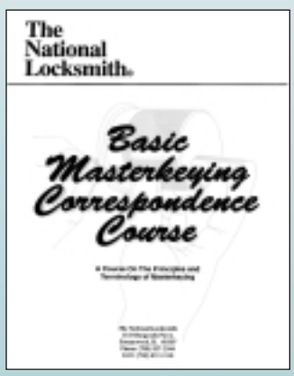
Detroit. Every commonly used safecracking technique is covered in this book, from drilling through the door at drop in or punching the handle cam, to side and top drilling for the change key hole and punching lockbolts and locking bolts. The techniques are depicted in step-by-step detail, and are performed on commonly seen safes. This is an excellent addition to The National Locksmith Guide To Safe Opening series of books.

Basic Masterkeying Correspondence Course. This 450 page course features 13 lessons on basic masterkeying, 12 self quizzes, 4 tests, I midterm exam and 1 final exam. The course covers correct layout of a building floor plan; selecting a proper Top Master Key; setting up a Key Bitting Array for one and two step systems; and picking Master Keys and assigning key numbers using the Standard Key Coding System to name just a few. This book is designed for the locksmith who wishes to become proficient in masterkeying layout and design.

If you are interested in any of these excellent books or want information on a number of other fine manuals *The National Locksmith carries call: (630) 837-2044.*



The National Locksmith's Penetration Party by Dave McOmie



The National Locksmith's Basic Masterkeing Correspondence Course

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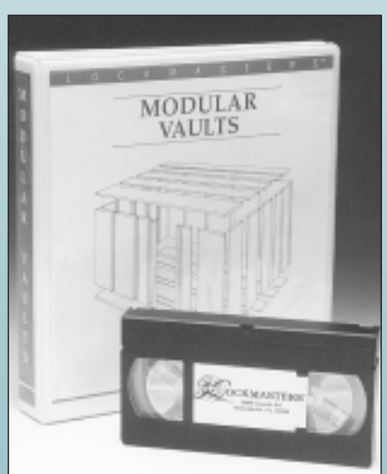
SRi and Tech Train Productions are the automotive specialists - your best source for automotive tools, manuals, and videos.

Click here for more information

Instructional Videos

High Tech Tools Trouble Shooting Car Opening Video Seminar.

The new 1996 Trouble Shooting Car Opening Video Seminar is more complete than ever before. It covers the most difficult openings in clearest detail. Special photographic lighting techniques show the openings from inside the doors. Alternate opening methods are often shown. *For more information contact High Tech Tools at: 1-800-323-8324.*



Lockmasters Modular Vault Installation: Manual and Video

Lockmasters Modular Vault Installation: Manual and Video

Modular vault construction is the way of the future! Learn what it takes to get started in the installation of modular vaults through Lockmasters' reference manual and video tape. The manual includes: Banking and government regulations that pertain to modular vaults. Equipment lists for starting and installation business; Vault panel comparisons' Vault product manufacturers guide and U.L. specifications. The video includes: Actual footage of modular vault construction with concrete panels. *Call Lockmasters at 1-800-654-0637 for more information.*

Tech-Train Productions, The Leader In Locksmith Videos

Commonly referred to as the video king of locksmithing, Tech-Train offers a number of educational how-to videos. Among the most affordable video titles are: Basic Car Opening, Car Opening Updates #1 through #7, Basic Locksmithing, Safe Deposit Lock Servicing, Ford, GM and Chrysler Steering Column Series, GM, Ford and Chrysler Locks, Door Panel Servicing, Air Bag Servicing, VATS, Toyota Split Tumbler Locks and the most popular video on how to master the art of impressioning. These are but a few of the titles offered to the locksmith. *For more information or a free catalog, call: 800-356-0136.* TNL

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The National Locksmith

The National Locksmith®

A Supplement to ISC EAST August 1996 New York The National Locksmith

Vindicator MicroLock™ 10

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also . . .

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Modern Safe Locks Tech Bulletin page ISC-13

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Welcome To The Show!

On The Cover
Vindicator...
The new MicroLock 10 combines the security of both a combination and an electronic key.

New York Conference Program Looks at Technology Issues and Business Strategies

The ISC EXPO/New York 1996, will feature nearly 60 seminars, workshops and luncheon forums. Emerging technologies, new applications, industry issues and business strategies will all be discussed during the program which is scheduled to run Monday, August 26 through Wednesday, August 28 at the Jacob K. Javits Convention Center in New York City.

"From the basics for those just entering the field, to updating skills and exploring new business avenues for those who are already immersed in the industry, the ISC EXPO Conference offers something for everyone," said Dennis MacDonald, Sr. Vice President of Association Expositions & Services, the management company for the event. "The conference offers everything from the nuts and bolts to the details of new technology and applications, as well as how to position your business to maximize its full potential."

The program is arranged in seven business and technology tracks: Access Control Track, Business Management Track, Closed Circuit Television Track, Communication & Transmission Track, Home Automation Track, Sales & Marketing Track and Special Interest Track. Topics offered are of special interest to security dealers, installers and end-users as well as others allied to the field including: architects, architectural engineers, distributors, electricians, facilities managers, financial managers, law enforcement officials, loss prevention managers, manufacturers, plant managers, public safety officials, retailers, safety managers, security managers, security consultants, security guard services, systems specifiers.

College campus security and applications for the All-Campus Card will be explored in "The All-Campus Card: Security Applications and Opportunities for the 21st Century". Within the past 10 years, more than 1,000 colleges and universities have adopted some form of an "All-Campus Card". With new campus priorities, vendor partnerships, emerging technologies and eventual investments by schools of nearly $1,000,000 in their "All-Campus Card" programs, institutions are changing how they conduct business and what types of vendors they will utilize in the future.

"Six Essential 'How-Tos' for Success in Electronic Home Systems," sponsored by SDM

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ISC EAST Show - Booth Listings

INTERNATIONAL SECURITY CONFERENCE - EAST
August 27 - 29, 1996
Jacob Javits Center, New York

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TNL

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STRATTEC
ASP
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medeco HIGH SECURITY LOCKS
NATIONAL AUTO LOCK SERVICE, INC.
The National Locksmith

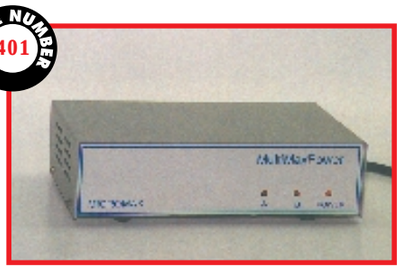
PRODUCT SHOWCASE

The ISC East Show - August 1996

Circle the numbers on the RAPID REPLY CARD and send it in.

MICROMAX Announces The New Multimaxpower Power Supply For The CCTV/ALARM Industry

CIRCLE NUMBER 401



Never before has it been so easy to power your CCTV cameras, motion detectors, and alarm accessories from one supply.

MICROMAX developed the Multimaxpower a product that saves you time and money. No more need to search for (or have installed) many available outlets. No need for separate supplies for your 24VAC, 9VDC, and 12VDC (or any other DC voltage) needs. All units have output currents of over 6 amps, 6 foot power cords and 20 sets of easy connect screw terminals. All units carry a lifetime limited warranty.

Universal Magnetic Lock Controller by Domino Engineering

CIRCLE NUMBER 402

Domino Engineering has introduced a new cost-efficient Magnetic Lock Controller (MLC-1, "MAGGIE") which provides all timing and control features for virtually any magnetic lock installation. With this Controller you need only a simple mag lock, a power supply, and an exit bar switch to complete a delayed-egress installation. Add a jamb switch and a speaker, and you can have exit alarm, door-blocked-open timing/alarm, and door-forced-open alarm. Add a simple button and/or keyswitch for authorized exit. A 20-code keypad is also available as a plug-in item. The MLC-1 also has terminals for connecting to a fire alarm system for immediate or delayed release, and an alarm output for tie-in to the local alarm system.

Litton's Access Control and Security Monitoring System with X-Windows

Litton's SuperVision XL Security Monitoring and Access Control system utilizes the latest computer technology designed specifically to meet the needs of the security industry. SuperVision XL includes windowing architecture for ease of operation in this truly integrated system. Icons provide quick and easy

CIRCLE NUMBER 403

access to programs Windowing architecture, providing user-friendly graphics utilizing pull-down and pop-up menus for presentation of alarm points, remotes and other functions. Accessible via mouse, keypad, and/or touch screen. Operates under a variety of operating systems including VMS. Uses SQl command language, the industry standard. Can communicate on multiple formats simultaneously - poll and select, dial-up, RS-232, RS-485, fiber optics, SNA/SDLC, and others.

SuperHet RF Access Line by DoorKing

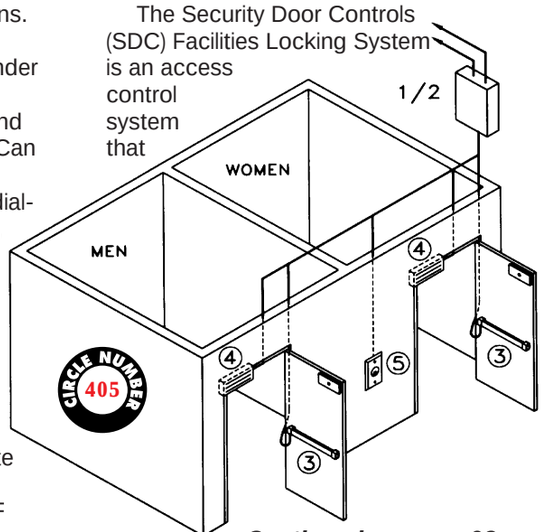
DoorKing Inc. now offers a complete line of RF access control products to meet almost any job requirement. The complete line of RF products uses Superhetrodyne circuitry in the RF section which provides superior performance over super-regenerative type receivers. The 1514 receiver is a complete access control system designed for outdoor applications

CIRCLE NUMBER 404

and can be used as a stand alone device, or programmed to output in wiegand format. The receiver will store up to 16,000 unique transmitter codes, and up to 10 facility codes. The two internal relays can be programmed to respond to different transmitter buttons or different transmitter or entry codes. The 1514 also features a block coding program, which allows easy programming of all transmitters in a single short programming sequence.

Security Door Controls Helps Prevent Vandalism Using Emlock

The Security Door Controls (SDC) Facilities Locking System is an access control system that



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safely allows facilities to be secured with zero expense for lock maintenance and personnel who manually lock and unlock facilities at public parks, malls, stadiums, colleges, universities, transportation centers, and residential community recreation areas. The Facility Locking System uses the electromagnetic EmLock in its access control system with a timer, allowing restroom facilities, for example, to be secured at a specified hour each evening. The doors automatically unlock every morning. Panic bars on the inside of the door prevent a person from being locked in over night. Upon exiting, the door automatically locks. The EmLock is powerful, weather resistant and maintenance free because it has no moving parts to bind or wear out.

ITI Security Pro Systems 4-Button Keychain Touchpad

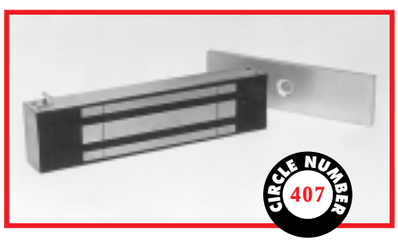
CIRCLE NUMBER 406

ITI's new wireless 4-Button Keychain Touchpad provides convenient options for Security Pro 2000 and 4000 users. Users can arm or disarm their systems, activate police or auxiliary panic, and turn lights on or off from 500 feet away.

When used with the Security Pro 4000, the Keychain Touchpad can also turn the Energy Saver Module on or off, make lights flash on and off, and operate a garage door opener. The convenient new touchpad makes the easy SecurityPro systems even easier to use. Designed to fit on a keychain, in a pocket, or a purse, the 4-Button Keychain Touchpad is learned either as a sensor or as a wireless touchpad by the control panel in a few simple steps.

Securitron Introduces New Electromagnetic Lock

Securitron Magnalock Corporation, World Leader in Electromagnetic Locking Technology®, with over 25 years of experience in manufacturing of electromagnetic locks, introduces its new addition to it Magnalock® family; the Model 82 Magnalock®. The Model 82 is designed for high security uses such as securing steel re-enforced doors, large industrial gates or double doors to name a few. The Model 82 provides for a holding force greater than 1800 lbs. and is housed in a weather and vandal proof stainless steel case. All metal parts are plated to prevent rusting making it at home indoors or outdoors.



The Model 82 incorporates the newest technology in electromagnetic locking devices. They include an efficient design consuming only four watts of power (170mA @ 24 VDC, 320 mA @ 12 VDC), a new patented solid state instant release/noise suppression circuit (no external electronics needed for access control/alarm equipment).

ASP Inc.

ASP - Your Auto Service Center for the World

Click here for more information

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Guards To Protect Clocks, Bells, Etc. Announced By STI

Recent additions to the STI Stopper® Line are the STI Clock/Bell Damage Stoppers® that are designed to protect clocks, bells and similar instruments from vandalism and accidental damage. These units that come in multiple sizes are

constructed of coated 9-gauge steel wire. Their octagon shape also help the covers take hard knocks in stride. This and other STI protective covers are designed for areas where abuse is severe, such as correctional facilities, educational facilities, etc. STI is best know for its unique and patented Stopper®II device that helps stop false fire alarms without restricting legitimate alarms.

Sentex Low Cost Keychain Transmitters

Sentex is pleased to announce the introduction of its new Keychain Transmitters for its radio controlled access systems. These new Keychain transmitters are competitively priced with the standard “visor” size transmitters, and are small enough to fit comfortably in your pocket or purse. Even though they are very affordable, these transmitters are sequentially encoded and individually labeled so that they may be used without AutoKey Systems (which

DCI

Don’t panic! We have Security Exit Devices.

Click here for more information

hes

To be a World Leader You Need Quality Products, Innovative Technology and Strong Partners.

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provide low cost, stand-alone radio access control) as well as with ClikCard receivers (which have a weigand output and can be connected to almost any car access system). Sentex's Keychain Transmitters are available in 1- and 2-button versions.

Tele Entry 5000 Wireless Universal Entry Security System

The new Tele Entry 5000 series system from Amtel screens residents, visitors, postman, emergency service personnel and even salesmen for secure entry through the lobby or a gate. The compact unit, about 10" X 12" X 5" has a scrolling directory that shows the names of all residents who so they can talk to the visitor by phone and allow entry by pressing '9' on the phone. It can also have a hidden CCTV camera so the resident can see the visitor on his TV; a private entry code or a card reader for use by the residents; a postal lock switch for

the postman; and special keys for use by the Police, Fire, Ambulance, Couriers, garbage man and, even the newspaper delivery boy. The unit is also available in a "one Touch" key model where the visitor simply presses the key with the resident's name on it. TNL

HPC has it all:
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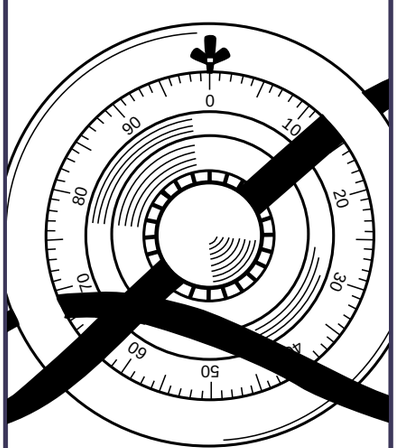
Lockmasters has a 44 year history of training security professionals.



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The National Locksmith

Vindicator's MICROLOCK™ 10

Combo-key Adds Security & Ease of Use to Vindicator's New MicroLock™ 10!

The Vindicator MicroLock 10 is a general purpose combo-key safe lock. Combo-key locks use both a combination and an electronic key to verify access. It is fast and easy to operate. Furthermore, it is a direct replacement for most mechanical combination locks making retrofits a breeze. It supports one or two users and the combinations are easily user-changeable without tools. The MicroLock 10 provides optional time delay for enhanced robbery protection. The optional alarm interface triggers a silent hold-up alarm.

Vindicator's combo-key locks provide increased security because a user must both: know a 6-digit combination and possess a unique electronic MicroKey™. Traditional safe locks are opened by either a physical key, which may be stolen or duplicated, or with a combination, which may be shared or otherwise discovered. The combo-key approach makes it substantially more difficult for a thief to gain entry into a safe. A spy-proof dial is unnecessary since knowledge of the combination is worthless without the matching MicroKey.

Easy to Use

Using the lock is even easier. The combination is entered by pressing the buttons for a 6-digit combination and inserting an electronic MicroKey. A correct combination and a valid key permits rotation of the dial. This rotation draws the bolt back and unlocks the lock. This is an improvement over other electronic lock technologies that use either a solenoid or a motor to move the lock bolt. The mechanical movement of the bolt in the MicroLock 10 prevents problems associated with side or end pressure on the lock bolt. Users can change their own combinations and replacement keys may be purchased from their locksmith.

Easy Installation

Installing a MicroLock 10 is easy. Once the original lock is removed, the only tools required are a screwdriver and a hacksaw. A six-inch long square spindle (provided with the MicroLock 10) requires trimming to the thickness of the safe door. The new dial ring screws into the existing dial ring holes and the lock housing screws to the inside of the safe door using existing screw holes. A small cable lays in the spindle shaft's groove. The shaft and cable pass through the spindle hole and the cable plugs into the lock housing. A battery box mounts to the inside of the door and also plugs into the lock housing. Once the battery is connected you're ready to go. Typical installation time is about 20 minutes.

Locksmith Programmable

A special Mode Key (available only to locksmiths) is used to set the programmable features of the MicroLock 10. The MicroLock 10 can be programmed to several modes, including manager mode, time delayed access, and dual custody mode.

The Vindicator MicroLock 10 is available through major locksmith distributors throughout the United States and in 22 countries worldwide.

Since 1973, US government agencies charged with national security and protecting the nation's most critical assets have trusted Vindicator's security technologies. In 1992, Vindicator took this technology to the commercial marketplace where it was embraced by a host of America's most successful companies such as Taco Bell Corporation, Tiffany's, KFC, Starbuck's Coffee, and Service Merchandise. Now Vindicator is bringing those benefits to you in a family of electric locks that provide the highest standards of security, ease-of-use, and affordability. The MicroLock 10 is the first of such products. TNL

For more information on the MicroLock 10 contact:

Vindicator
3001 Bee Caves Road
Austin TX 78746-5561.
Phone: (512) 314-1200
E-mail: lock@vind.com.

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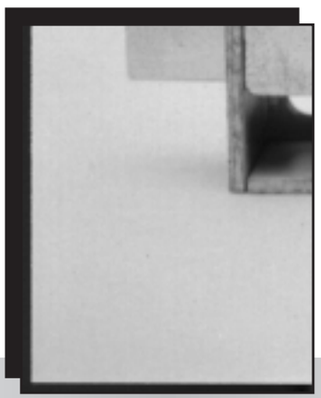
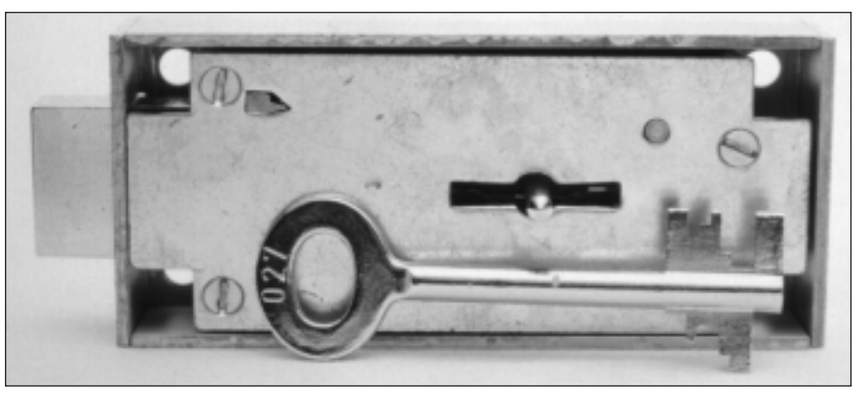


This material was excerpted from the Mark Bates book titled Modern Safe Locks. The book covers combination operating and changing procedures for virtually every combination lock both mechanical and electronic, that you will encounter on a daily basis. Modern Safe Locks is available for purchase through ***The National Locksmith.***

STUV

MODEL:	**Key lock**
DESCRIPTION:	Eight lever, key-operated, changeable safe lock. Non-key retaining.
RATINGS:	None
FACTORY COMBINATION:	Thought to be set to random factory keys.
OPENING PROCEDURES:	***a.*** Insert operating key. ***b.*** Turn key right to stop (1/2 turn). ***c.*** Remove key.
TO LOCK:	***a.*** Insert operating key. ***b.*** Turn key left to stop. ***c.*** Remove key.
CHANGING PROCEDURE:	***WITH THE SAFE DOOR OPEN...*** ***a.*** Open the lock (steps *a* through *c* under "Opening Procedures"). ***b.*** Insert new operating key in lock. ***c.*** Turn new key left to stop and remove it. ***d.*** Test new key (steps *a* through *c* under "Opening Procedures").
TOOLS NEEDED:	Operating key, new operating key.
NOTES:	Usually used as an auxiliary lock. In the United States the Stuv lock is most frequently found on Tann safes.



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and Home Systems Installer will offer a panel discussion providing useful and practical information focused on succeeding in the growing market for electronic home systems. Alan Kruglak, President of ARK Solutions will present "How to Develop, Package and Implement Service Programs," which looks at how to design, package and implement a service program for firms catering to the commercial market, based on 16 years of experience.

The Special Interest Track offers several exciting programs including, "Internet 101: How to Utilize the Internet to Your Advantage,": The second annual "Security Industry Power Lunch" co-sponsored by SDM magazine, Security magazine and Butterworth-Heinemann; "New and Emerging Technologies and Applications: Moving into the 21st Century," and the "Secrets of False Alarm Prevention: Improving Your Bottom Line."

As an added bonus, books at ISC EXPO will be offered at a 10 percent discount through Butterworth-Heinemann's Books-At-The-Show Club.

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As a special bonus, "Full Event" conferees will receive a $20 discount coupon and "All Seminars" conferees will receive a $10 discount coupon. All other ISC EXPO pre-registrants will receive a $5 discount coupon.

The exhibits, held in conjunction with the conference, open one day later and run through Thursday. More than 400 exhibitors will participate displaying the newest in security technology products and services . Over 80 of those exhibitors are new to the Show. Four pavilions will be featured: Biometric, CCTV, Home Systems and Security Hardware.

ISC EXPO events are sponsored by the Security Industry Association (SIA) and the National Burglar & Fire Alarm Association (NBFAA), and endorsed by the Closed Circuit Television Manufacturers Association (CCTMA), Home Automation Association (HAA), Security and SDM Magazines.

Reed Exhibition Companies is the world's leading organizer of trade and public shows with a current portfolio of 310 events servicing 50 industry sectors. In total 96,000 exhibiting companies take advantage of Reed's marketing opportunities which attract nearly 9 million buyers globally. ISC EXPO/New York and ISC EXPO/Las Vegas are both Reed events in the security industry. Reed Exhibition Companies is part of Reed Elsevier plc group, one of the world's leading publishing and information businesses. For information on attending or exhibiting at ISC EXPO, contact ISC EXPO Customer Service at 203-840-5602, or write Association Expositions & Services, 383 Main Avenue, Norwalk, CT 06851, or send email to isc@reedexpo.com>. TNL

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Electronic Security Distributors

Electronic locksmithing runs the gamut from the simple sale and installation of an electronic strike, all the way up to complex installations of multi-door access control systems. One of the most important factors to a locksmith when contemplating such jobs is where to purchase the needed materials and products.

In this section, you will find a listing of locksmith distributors who stock electronic security equipment. As you are deciding the question of where to purchase, be sure to speak to the sales staff to find out if they are ready, willing and able to answer your questions and advise you on your installation needs and plans.

Many distributors are very knowledgeable about the electronic resources they stock, and can even put you in touch with the manufacturer if needed to solve complicated issues. In this industry, we are fortunate to have a vast selection not only of products, but also of electronic locksmith distributors.

Remember that your distributor can serve you as a resource for information as well as for products. By making a well considered decision, you can form a working partnership with your wholesaler that will benefit you and your customer.

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Fax: 313-965-1093

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Burlington Ont., Canada, L7L 5V2
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Fax: 905-319-0366

Accredited Lock Supply Co.
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Phone: 800-652-2835, 201-865-5015
Fax: 201-865-5031

Ace Lock & Security Supply
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Union, NJ, 07083
Phone: 800-223-5625, 908-688-7666
Fax: 908-688-2442

Acme Security Systems
1922 Republic Ave.
San Leandro, CA, 94577
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Fax: 800-435-8233

Agences W. Pelletier (1980) Inc.
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Montreal Quebec,
Canada, H3N 1T7
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Fax: 514-276-9413

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8335 S. Hindry
Los Angeles, CA, 90045-3293
Phone: 800-858-1726, 310-568-9885
Fax: 310-568-1507

American Access Supply
4304 S. 131st Pl
Seattle, WA, 98168
Phone: 800-559-9634, 206-244-7269
Fax: 800-243-3049

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Fax: 804-282-1007

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Fax: 714-579-7554

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Fax: 708-296-9259

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Fax: 718-438-3327, 800-951-7000

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Fax: 404-888-0834

Associated Lock & Supply
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Canada, V3C 4T7
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Fax: 604-942-3761

Automatic Gate Wholesalers
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Modesto, CA, 95356
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Fax: 800-438-2301

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Brooklyn, NY, 11209
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Fax: 201-743-6357

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Fax: 202-832-1359

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Fax: 617-787-3425

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Accord, MA, 02043
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Fax: 617-335-5342

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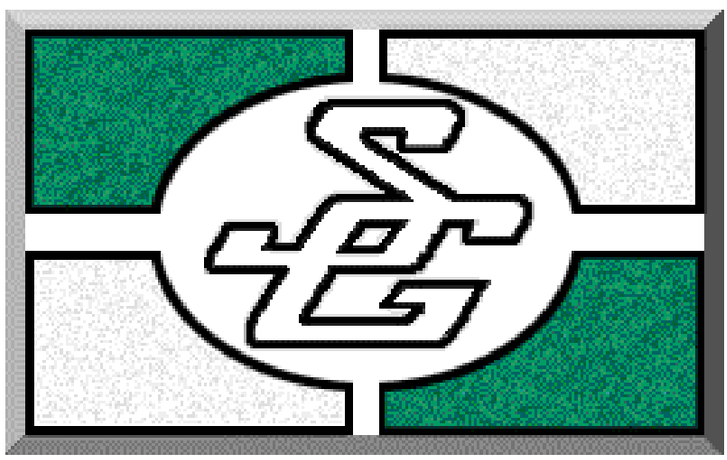

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Fax: 816-233-3092

City Intercoms Inc.
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Fax: 800-598-2865

Clark Security Products
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San Diego, CA, 92111-1491
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Fax: 619-565-4605

Closed Circuit Designs
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N. Miami Beach, FL, 33179
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Fax: 305-652-3471

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Fax: 703-550-8857

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Fax: 617-661-3168

Craftmaster Hardware Co. Inc.
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Fax: 201-646-0181

Cypress Security Products Ltd.
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Calgary AB, Canada, T2E 6X8
Phone: 800-561-1967, 403-250-1967
Fax: 403-250-1969

Dealer Connection Inc.
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Fax: 516-928-4745

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Fax: 713-957-2122

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Fortress Safe & Lock
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Cincinnati, OH, 45246
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Fax: 513-772-5276

Fradon Lock Co. Inc.
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Syracuse, NY, 13203
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Fax: 315-472-0958

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Gamalski Building Specialties
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Auburn Hills, MI, 48326
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Great Lakes Lock Distributors
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Fax: 800-967-4250

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Fax: 313-591-7289

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Fax: 814-371-0590

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Howard Sales Co.
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IDN-Acme Wholesale Dist.
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Fax: 504-837-7321

IDN-Canada Lock Products
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Fax: 416-248-9945

IDN-H. Hoffman Co.
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Fax: 708-456-0878

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Fax: 215-288-2511

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Fax: 215-922-6552

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Fax: 808-946-6480

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Fax: 716-325-7196

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Fax: 604-875-9174

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Fax: 213-255-8457

Key Sales & Supply Co.
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Detroit, MI, 48227
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313-931-7720
Fax: 313-931-7758

Keystone Safe Distributors
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Huntingdon Valley, PA, 19006
Phone: 800-755-2893, 215-947-6330
Fax: 215-627-6419

Kramer Boys Locksmith Supply
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Trenton, NJ, 08609
Phone: 800-222-2692, 609-586-0642

Fax: 609-586-0512
Lock Wise Security Products
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Miami, FL, 33056
Phone: 800-447-6616, 305-625-5525
Fax: 305-623-9564

Lockmasters Inc.
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Nicolasville, KY, 40356
Phone: 800-654-0637, 606-885-6041
Fax: 606-885-7093

Locks Co.
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N. Miami, FL, 33162
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Syracuse, NY, 13204
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Memphis, TN, 38141-6804
Phone: 800-238-7541, 901-797-8000
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704-333-9112/ 704-333-0556
Fax: 704-332-8664

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Fax: 901-795-3475

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Kansas City, MO, 64120
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816-241-8500 x 1690
Fax: 816-920-1144

Midwest Wholesale Distributors
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Kansas City, MO, 64120
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Fax: 800-621-6581

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Northwest Lock & Supply Co.
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Albany, OR, 97321
Phone: 800-359-9425,
503-967-2749
Fax: 503-928-9338

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So. Boston, MA, 02127
Phone: 800-628-2822, 617-269-7110
Fax: 617-269-0547, 800-262-0547

Protection Group Inc.
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Clearwater, FL, 34621
Phone: 813-785-0642
Fax: 813-784-9279

Richardson Electronics Ltd.
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La Fox, IL, 60147
Phone: 800-348-5580,
708-208-2200
Fax: 708-208-2550

Rininger Lock & Supply
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Lemon Grove, CA, 91945
Phone: 619-463-0170
Fax: 619-697-2590

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Compton, CA, 90220
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Fax: 310-639-7569S

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Yakima, WA, 98902
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Silver Spring, MD, 20910
Phone: 800-633-9977, 301-608-9000
Fax: 800-233-2454

Security Equipment Supply
4132 Shoreline Dr. Ste. E
Earth City, MO, 63045
Phone: 800-325-0221, 314-298-8930
Fax: 314-298-8962

Security House
Padlock Distributors
665 Milway Ave. Unit 48
Concord Ont.,
Canada, L4K 3T8
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3612 N. 16th St.
Phoenix, AZ, 85016
Phone: 800-426-0200, 602-234-3883
Fax: 602-234-3882

Sentinel Wholesale Hdwe.
Sen. Div. Ind.
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E. Farmingdale, NY, 11735-1283
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Fax: 516-753-6004

Serrubec Inc.
2073 Chartier Ave.
Montreal Dorval, Canada, H9P 1H3
Phone: 800-361-0243, 514-631-6791
Fax: 514-631-0494

Shield Supply & Services Ltd.
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Winnipeg Man., Canada, R3H 0Z1
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Fax: 204-774-5627

Southern Lock & Supply Co.
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Fax: 800-447-2299

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Wholesale Locksmith Supply
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Fax: 800-535-5625

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Atlanta, GA, 30340
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True Back Door Security With ARM-A-DOR™

SECURE PANIC HARDWARE

BY JAKE JAKUBUSKI

Security and Life Safety Codes are not, by virtue of their individual definitions, the most compatible of concepts. Particularly when it comes to back door security. In fact, until recently, the accepted presumption was that the two principles could form, at best, only an uneasy alliance.

If you examine some of the hardware that is — and has been — offered in the market-place that is touted to "comply with Life Safety Codes" you'll see that it is often cumbersome and at least in my opinion, often incapable of meeting NFPA's "One Motion Egress" mandate. I'm not suggesting there are no products available to accomplish both physical security and Life Safety compliance I just feel that until recently, there were truly few products that could deliver what the promotional literature promised.

Well! Let this ol' boy tell you the good news. Sargent & Greenleaf has developed, and is marketing a product that will not only lock a problem door down tight enough to discourage most bad guys and gals from trying to pry it open it will also make the local fire marshal smile! It's called: "Arm - A - Dor".

Arm - A - Dor offers the security of a solid steel drop bar that holds the door firmly shut by locking behind the inside of the jamb *(see Photograph 1)* while complying with Life Safety Codes by meeting that all important provision of "One Motion Egress". You got it! A panic device that uses solid square bars to hold the door shut by locking it to the inside of the frame. Believe me, these are heavy-duty, one and a quarter inch square steel locking bolts, that easily release with a push on the pressure bar — just like a normal panic exit device. However, they lock behind the frame with a TWO INCH BOLT PROJECTION! Now that's really heavy duty.

1. Arm - A - Dor offers the security of a solid steel drop bar that holds the door firmly shut by locking behind the inside of the jamb.

The Arm-A-Dor is mounted to the door with Grade 5 carriage bolts (3/8" x 2-1/2") with exterior washers that surround the bolt head and provides a great deal of tamper resistant security from the outside *(see Photograph 2)*. To prevent the door (in the case of hollow metal or foam filled metal doors) from collapsing when these bolts are tightened, S&G provides internal door support sleeves (Also shown in *Photograph 2*) with each unit to help ensure the rigidity of the door's skin.

As long as the door itself is in good shape, Arm-A-Dor panic hardware provides excellent forced-entry resistance and meets the Standard for Safety UL 305 (Listed 3F43 Panic Hardware) from Underwriter's Laboratories. The Arm-A-Door also

2. Grade 5 carriage bolts with exterior washers that surround the bolt head and provides a great deal of tamper resistant security from the outside.

meets NFPA-101 Life Safety Code mandates, the Universal Building Code, the BOCA and ANSI Standard 156.3: Exit Device criteria. In other words: "It's one tough piece of equipment that covers it all!"

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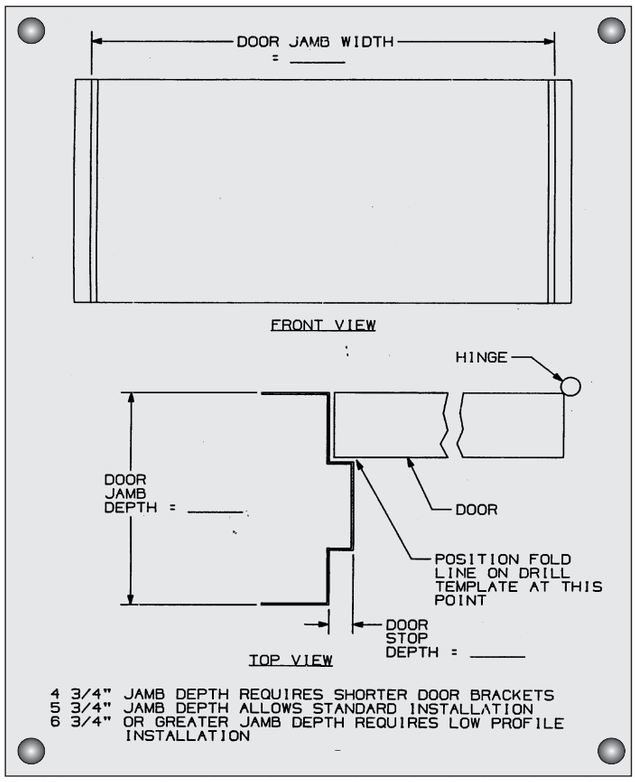
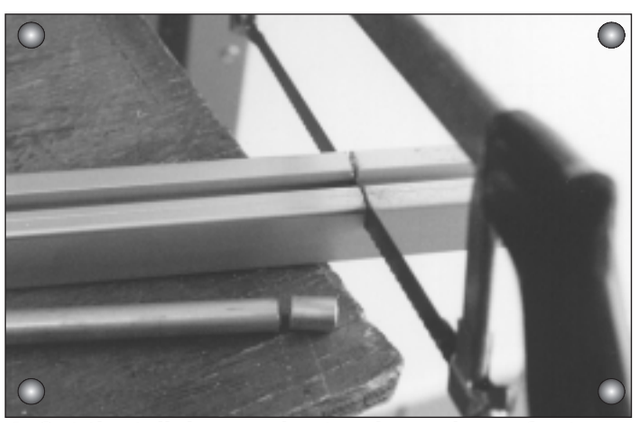
3. This brand-new door, on a brand-new building, required a Full Surface Pivot Hinge to correct a sagging problem.


DOOR JAMB WIDTH
=
FRONT VIEW
HINGE
DOOR JAMB DEPTH =
DOOR
POSITION FOLD LINE ON DRILL TEMPLATE AT THIS POINT
DOOR STOP DEPTH =
TOP VIEW
4 3/4" JAMB DEPTH REQUIRES SHORTER DOOR BRACKETS
5 3/4" JAMB DEPTH ALLOWS STANDARD INSTALLATION
6 3/4" OR GREATER JAMB DEPTH REQUIRES LOW PROFILE INSTALLATION

A. Measure the door frame, door jamb depth and door stop depth.



4. Cut the tailpiece and extension rod as refer to the Table 1 in the installation instructions.

Both the A101 and the A102 series come with or without an alarm feature. the A101 series has an automatic relocking feature that extends the locking bolt automatically when the door is closed. The A102 series is a manual version and the device has to be locked by hand when the door is closed. For doors with a frame greater then 6-3/4" (up to 12-3/4") S & G offers a "Low Profile" installation kit (Part number A104-001) which will accommodate all the Arm-A-Dor models. Each lock carries a five year limited warranty.

Now, why do you think this ol' boy is so excited over the Arm-A-Dor? Because I just installed one on a fast-food outlet belonging to one of my regular customers and I want you to know I was impressed with the overall installation, the quality of the product and the protection it will obviously offer my customer. If you'll bear with me, I'll show you how easy these units install, where they can be sold and, in general, give you enough information on Arm-A-Dor for you to seriously increase your shekel intake over the next few years or so.

Aside from the sale itself, there are five considerations to be taken into account by the installer. They are: Preparation, Marking and Drilling, Mounting the Assembly, and the Operation of the Product. In addition to a solid instruction manual, S&G has produced an installation video that is an excellent aid for the first-time Arm-A-Dor installer. You can obtain that video through your local distributor when you order your first Arm-A-Dor.

Preparation:

Part of the preparation is making sure that the door you want to install an Arm-A-Dor on is in good shape. Make sure the door closes properly and is not sagging or binding in any way. Check to make sure the door is rigid. That is that the door does not "flex" because of broken stiles, rails or headers. If the door is not in prime condition, you're going to have trouble getting your Arm-A-Dor to deliver its full potential as a security device.

As you can see in *Photograph 3*, this

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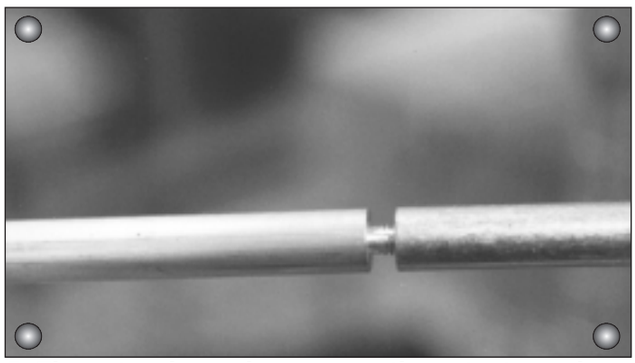
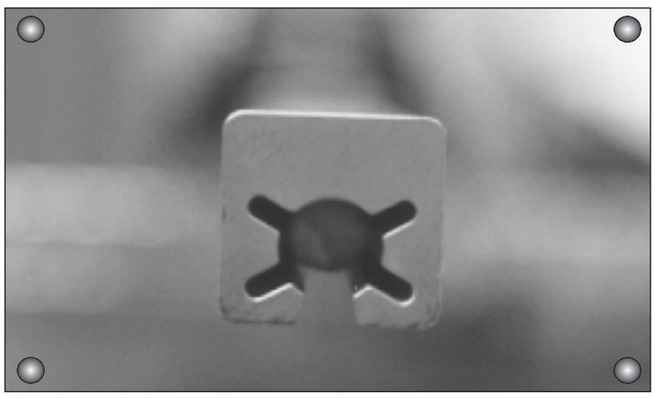


5. The extension rod screws on the actuator rod.



6. The tailpiece slips over the rod.

7. The Emergency Label just slides into the push bar.

8. The installed mortise cylinder is complete.

9. The batteries are hooked up and installed in the end cap and the end cap is re-attached to the panic device.

brand-new door, on a brand-new building, required a Full Surface Pivot Hinge to correct a sagging problem (see arrow 1). Arrows number 2, 3 and 4 direct your attention to the clearance of the door in the frame and arrow 5 is to remind you to make sure the bottom of the door is clearing the threshold and not dragging.

The tools and supplies you'll need are nothing more then you would normally have in your tool box. However, if you are installing an alarm model, you'll need two 9-volt batteries and a 1-1/8" mortise cylinder. If you are installing a Low Profile Kit, you'll need a 3-1/4" hole saw and a 3/8" nut driver, which you may not have in your tool box.

Next you need to measure the door frame, door jamb depth and door stop depth *(see Illustration A)*.

Cut the tailpiece and extension rod (refer to the Table 1 in the installation instructions) as shown in *Photograph 4*. The extension rod screws on the actuator rod as shown in *Photograph 5*, and the tailpiece slips over the rod as seen in *Photograph 6*.

Photograph 7, shows the Emergency Label installed (it just slides in) and the installed mortise cylinder can be seen in *Photograph 8*. The batteries are hooked up and installed in the end cap and the end cap is re-attached to the panic device as shown in *Photograph 9*.

Marking and Drilling:

First determine the installation height (between 30" and 44" from the floor.) Mark that measurement on the door and use a two-foot level to carry the line across the door. Now fold the large drill template on the appropriate lines (determined by your measurements), place the "hinge side" of the template to the hinge side of the door and align the center line of the template with the line you mark on the door. Tape into place and center punch where indicated on the template.

Drill 1/4" holes completely through the door where indicated. Enlarge the inside hole to 3/8". Use a

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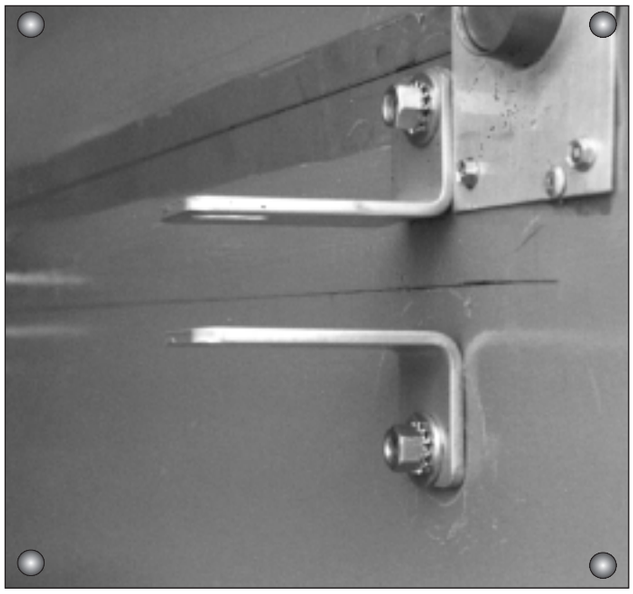
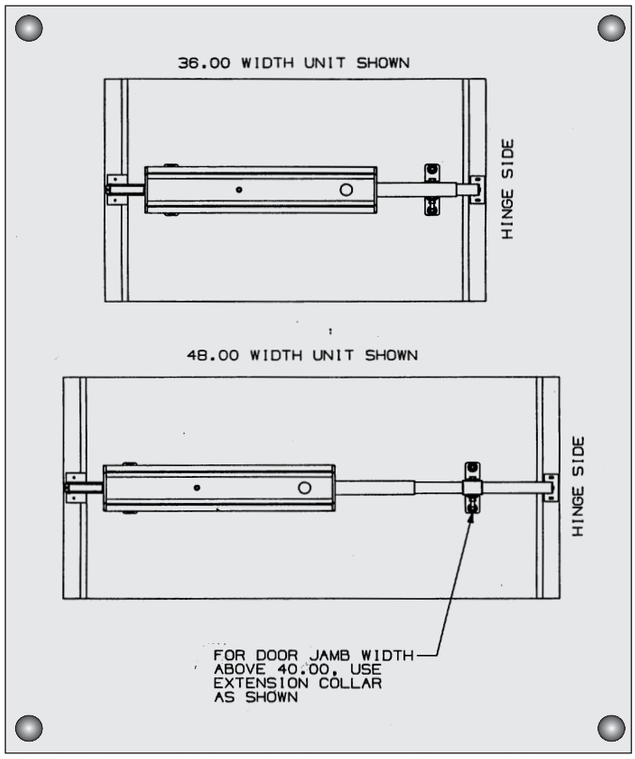


10. Install the bolts and brackets being sure to leave them loose enough to adjust when you hang the panic bar assembly on.


36.00 WIDTH UNIT SHOWN
HINGE SIDE
48.00 WIDTH UNIT SHOWN
HINGE SIDE
FOR DOOR JAMB WIDTH ABOVE 40.00, USE EXTENSION COLLAR AS SHOWN

B. The two variations in the mounting positions of the assembly are shown.

hole saw or a high-speed 5/8" bit to enlarge the outside hole to 5'/8". Be sure to cut only through the outside skin of the door. Now install the bolts and brackets (see *Photograph 10*) being sure to leave them loose enough to adjust when you hang the panic bar assembly on.

Mounting the Assembly:

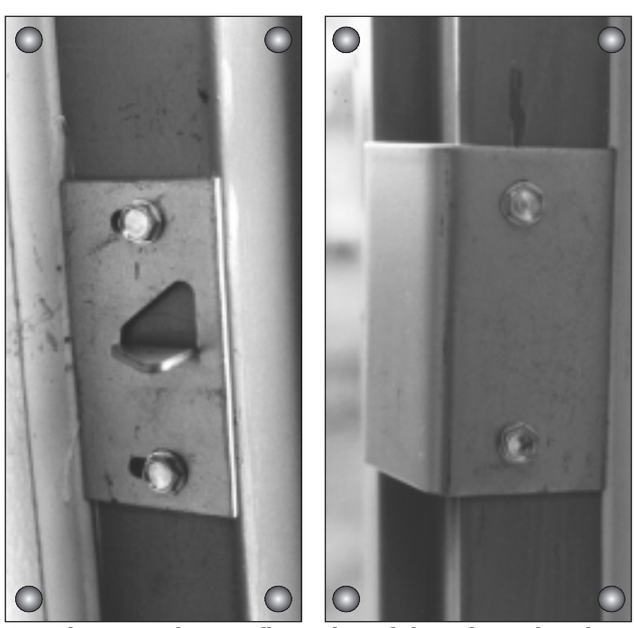
Illustration B, shows the two variations in the mounting positions of the assembly. You will note that when the opening is more than 40" wide, you must use the "Extension Collar" shown in the illustration.

Now mount the assembly to the mounting brackets and manually adjust the position of the panic device so that it complies with the recommended clearances in the installation instructions. The roller on the end of the bolt should clear the door jamb by no more than 1/8". When you are certain you have the Arm-A-Dor in its proper position, "snug" the bolts down, but don't tighten them completely yet.

Photograph 11, shows the mounting configuration of the release bracket (on the hinged side of the door) and the strike plate. Both of these items are positioned and mounted after you have mounted the Arm-A-Dor.

Next, the extension collar has four 1/8" holes drilled into it. Using a 1/8" drill bit, drill at those holes into the tailpiece and secure the tailpiece to the extension bracket with the rollpins (S&G is currently using four thread forming screws instead of the roll pins.)

That completes the installation with the exception of checking the door and pulling the nuts down tight on the brackets and mounting bars. *Photograph 12*, is the completely assembled Arm-A-Dor shown from the inside.



11. The mounting configuration of the release bracket on the hinged side of the door and the strike plate.

Operations:

With the alarm in the unarmed position, check the operation of the Arm-A-Dor. Make sure the bolt releases when the bar is pushed (it should take no more than fifteen pounds of push pressure to unlock). Make sure that the tailpiece and the bolt all clear the door jamb and noting on the door or the Arm-A-Dor hangs, binds or catches.

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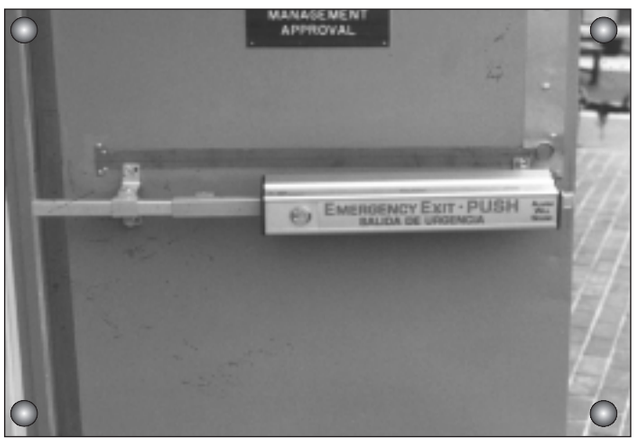

12. That completes the installation with the exception of checking the door and pulling the nuts down tight on the brackets and mounting bars.

Check to make sure that when the door closes (if you installed the A101 Automatic) that the bolts release and lock behind the jamb properly. Now try it with the alarm armed to be certain that the alarm functions properly.

When everything is working to your satisfaction, finish tightening the bolts, give the unit one more trial run, show the customer how the device works, collect your money and go home.

The Arm-A-Dor is designed to provide reliable back door security in restaurants, fast-food establishments, commercial and industrial applications and wherever there's a need to keep the thugs from using a heavy duty screwdriver or crowbar to defeat the average panic device or back door lock. I think it will do that very well.

The Arm-A-Dor (A101-002) that I installed retails for $695.00, plus sales tax and installation. If you were to use that retail as a starting point, add in your installation charges (two to three hours worth) and service call; and then deduct your cost of the unit from your favorite supplier and you'll come up with a pretty good gross profit for a one unit installation.

Of course that figure does not take into account any ancillary work you do like installing a pivot hinge or reworking the door so the Arm-A-Dor will be as truly effective as it can be. And before I forget, the Arm-A-Dor can be interfaced with existing alarm, door open or fire alarm warning systems.

To help you sell Arm-A-Dor's to your customers or prospective customers, Sargent and Greenleaf has produced a sales presentation video which answers questions and highlights the security offered by, and the durability of, the assembly. They also have some right classy sales brochures available to aid you in developing your sales. These materials should be available from the distributor you buy Arm-A-Dor from. If not call S &G for help.

Check with your favorite distributor for more information on the Arm-A-Dor. Or call Sargent and Greenleaf at: 606-885-9411.

Tell 'em: "Jake sent me!" Y'all heah me now?

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BUSINESS BRIEFS

Lock Museum Board Representatives

On May 3, 1996, at the 24th Annual Membership Meeting of The Lock Museum of America located in Terryville CT., a new slate of Officers were elected. Charles F. Stuttig III, CML., owner of Charles Stuttig Locksmith Inc. in Greenwich CT was elected President. Marcus Muirhead CRL., Sales Representative with American Lock And Supply, was elected Vice President. Geri Stuttig, Administrator of Charles Stuttig Locksmith Inc., was elected secretary. Reggie Murowski was elected Librarian. One new Board of Director was elected, Peter Leary a Sales Representative with Clark Security Products.

American Lock & Supply Forms Parent Company

Sean DeForrest, President and Chief Executive Officer of American Lock & Supply, the nation's leading distributor of mechanical and electronic security products announced the recent formation of a parent company, American Security Distribution. American Security Distribution will act as an umbrella corporate entity for its existing divisions — American Lock & Supply, American Access Supply, American Alarm Supply and Multi Security Products in Canada — as well as future acquisitions.

Master Lock Honors STRATTEC With World Class Supplier Award

Quality counts. A couple of top manufacturers in the security industry are proving it again. Master Lock, a global leader in the production of padlocks and residential locks, is honoring STRATTEC SECURITY CORP. with a World Class Supplier Award. Master Lock and STRATTEC began doing business in 1991. Since then, the number of Master Lock products

Master Lock honors Strattec with supplier award.

meeting specifications rose to 99 percent, according to Dan Strittmater, a Master Lock vice president.Master Lock also cut production costs by $1 million per year by greatly reducing the need to fix or scrap defective components and by trimming its own inspection needs and resulting administrative costs.

New Marketing & Sales Leader-Lock & Safe Industry

Steve Baker, President, Cannon Safe, Inc. is proud to announce the appointment of Larry McCall, Vice President, Marketing/Sales, L.J. Security Corp. as their exclusive sales agent for Cannon Security safes. Larry has spent over 35 years in the industry. He has served many companies over the years; Lockmasters, Sargent & Greenleaf, Major Safe Company, Johnson Pacific/Meilink, Dominion Lock and Allied/Gary Safe Company to name just a few. In the last 10 years he was Vice President Marketing/Sales for U S Security Safe since it started. The company was recently sold and Larry chose to join forces with us. Larry has spent all of his years working closely with the Locksmiths & Safe Dealers in many ways with seminars, educational classes, and innovative ideas to help the industry grow.

The Door And Hardware Institute Hosts Annual Convention Pre-Show Golf Tournament

DHI will host its annual convention preshow golf tournament, Friday, September 27, at The Vineyard Golf Course at Woodland Park. The tournament will be two scramble shotgun starts with the potential for 288 spots — 144 players in the morning and 144 in the afternoon. The morning shotgun starts at 8:15 a.m. and the afternoon start is at 1:30 p.m. Golf awards will be distributed on Friday evening at a special reception at the Omni Hotel. Sponsorship opportunities may be arranged through Golf Chairman, Tom Barrett at 513/779-9350. For information or a convention registration and housing packet, contact DHI at 703/222-2010; Fax: 703/222-2410. For information on how to exhibit, contact Steve Greenspan, DHI Exhibit Sales at 703/312-9145; Fax: 703/528-1724.

Master Lock Internet Site Receives Award

Master Lock's home page has again been recognized by an Internet review organization. Main Street Earth, a library of thousands of top-reviewed sites and home to many thousands of global net users, has acknowledged master Lock's efforts in making positive contributions to the world's Internet community. Master Lock's home page features security tops, crime statistics, company and production information, and a security tips contest. The company's home page address is: http://www.masterlock.com

LCN Earns Registration To ISO 9002

LCN, a leading manufacturer of door control products has earned registration to the ISO 9002 International Standard from Underwriters Laboratories, Inc. (UL). Registration to the ISO 9002 Series Standards means that LCN's manufacturing facility passed UL's evaluation to one of the international quality assurance standards of the International Organization for Standardization (ISO).

To maintain the Registration process, LCN's facility must successfully undergo at least two surveillance visits annually, showing ongoing conformance to the standards to which it is registered. LCN's certificate number of registration to ISO 9002 is 2312.

Interested In Electronic Security?

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Also available is "Electronic Access Control." Created for the technician with a strong knowledge of basic electricity, this five-day course includes product planning, specifications, installation and system troubleshooting.

For more information, call Lockmasters' Education Department at 1 (800)654-0637 or write to: Lock-masters®, Inc., 5085 Danville Road, Nicholasville KY 40356-9531. TNL

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Helpful hints from fellow locksmiths

America Online: NATL LOCK
Use the above address if you are on AOL.

Internet: natllock@aol.com
Use the Internet address if you are not on AOL.

Send in your tips and win.

by
Jake Jakubuwski

HOW TO ENTER
Simply send in your tip about how to do any aspect of locksmithing. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Write your tip down and send it to: *Jake Jakubuwski, Technitips Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107 or send your tips via E-mail to the E-mail address posted in the upper right hand corner of this page.* So get busy and send in your tips today. You may win cash or merchandise. At the end of the year, we choose winners for many major prizes. Wouldn't you like to be a prizewinner in 1996? Enter today! It's easier than you think.

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If your tip is chosen as the best tip of the month, not only do you win the All-Lock A-6200 Auto Service Kit, but you also automatically qualify to win one of the many excellent year end prizes!

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Yes, every tip published wins a prize. If your tip is printed, you'll win $25 in Locksmith Bucks. You can use these bucks to purchase any books or merchandise from *The National Locksmith*. Plus, be ready for Jake's Grab Bag prizes! Remember, everyone wins. (Please remember to include your complete mailing address - we cannot mail prizes to P.O. Boxes.)

These Prizes Awarded Each Month!

- All-Lock A-6200 Auto Service Kit
- American Lock & Supply $50 Merchandise Certificate
- HPC Pistolpick
- Sargent & Greenleaf 4400 series safe deposit lock
- Silca Keyblanks (100 Blanks)
- Pro-Lok PK15 Professional Lock Pick Set
- Tech-Train Training Video
- Sieveking Products EZ-Pull GM Wheel Puller
- Major Mfg. Products
- The Sieveking Auto Key Guide

Here it is August already which means, if you want a crack at those year end prizes and have not sent me your tip yet, you better get yourself to writing. You still have time to qualify for the end of year Grand Prize drawing, but folks, you need to get it in gear! And, when you send me that tip, remember to include your name and physical address so we can ship you the great prizes you're shooting for.

Now here's a tip from me to you, that has the potential to make you some serious shekels. As you're most likely aware, Life Safety Codes and physical security on the back doors of many businesses are often at odds with each other. That's no longer true. Sargent and Greenleaf has developed and introduced a great new product called Arm-A-Dor which, in my opinion, is the perfect solution to back door security and Life Safety Code mandates. Check out the Arm-A-Dor in this issue of The National Locksmith.

Finally, I want to say thanks to each one of you that has sent me a tip, trick or idea. By sending me those letters, you make my job a lot easier. Even if I may not use one of your tips, I might use the next one you send me. So, like the old radio preacher used to say: "Keep them cards and letters coming folks!" In the meantime, let's get on with this month's column and I'll see y'all next month: Y'all heah me, now?

All Lock Service Kit Winner
GM Capping Tool

Here's a GM capping tool that I made from some scrap wood, a piece of rubber and an old Kwikset Cylinder Removal Tool (part #1467).

Illustration 1, shows how to assemble these easily obtainable parts to make an effective and attractive capping tool for GM, and with various adopters a capping tool that will accommodate other makes as well.

The two 1-1/8" diameter holes that you see next to each other are drilled about 1/2" deep and hold five chrome and black GM caps each. The 1-1/8" hole that is in the corner of the tool by itself is drilled to a 1/4" depth and is the hole that is used for capping.

To make this capping tool, find a piece of lumber 1" x 3-1/2" x 5" in diameter and drill two 1-1/8" holes to a depth of 1/2" and one 1-1/8" hole to a depth of 1/4" as shown. About 2 - 1/2" from the end of the board and about 3/4" in from the edge, drill a hole to accept a #8 stove bolt nut and washer. Sand the board smooth and shellac, lacquer or urethane as desired.

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Next, bend a Kwikset Cylinder Removal Tool as shown in the illustration and when the base has dried, attach the Kwikset tool to the base with the #8 stove bolt. Make sure to put a washer between the Kwikset tool and the surface of the base which will prevent the tool from scoring the base.

Next glue the piece of rubber to the bottom of the base. This will keep the capping tool from sliding around on the work bench or in the van. Finally, cut a round piece of rubber to fit the diameter of the 1-1/8" hole. This is to give the face cap a mar resistant surface to rest on as you bring the capping "slide" across to bend the tabs down on the cap.

By using various "adapters" like key covers, and other readily available materials, you can fit caps on both foreign and domestic autos.

Lee WhitefordCalifornia

[Editor's Note: Lee sent me one of his GM Capping Tools. It is simple in design and easy to use. Best of all, it really works. However, for those of you who do not want to take the time to make your own capping tool, Strattec (formerly Briggs & Stratton) offers a GM capping tool with a plug holding feature for about $50. Strattec also has a capping tool for quickly replacing the face caps on the new Ford 8-cut door and truck locks. Thanks for the tip Lee. Read on for another tip on a home-made tool for staking face caps.]

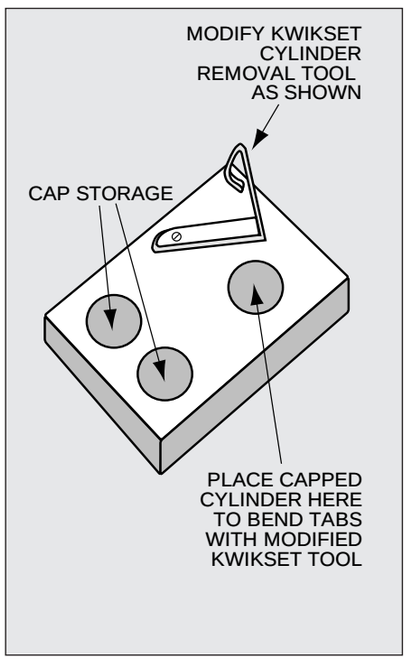
MODIFY KWIKSET CYLINDER REMOVAL TOOL AS SHOWN
CAP STORAGE
PLACE CAPPED CYLINDER HERE TO BEND TABS WITH MODIFIED KWIKSET TOOL

Illustration 1.

American Lock And Supply Winner

Alternative Capping Tool

Sometimes when staking face caps on various automotive locks, I wish that I had a third hand to hold the cylinders still and the face cap in place while I bent the tabs over to hold the cap to the cylinder. Well, I came up with an idea using a piece of wood 2" x 8"x 6" long. I use this large of a block for stability.

First I covered the wood block with a piece of terry cloth (you can use any soft material to prevent the face caps from getting scratched). Then using three wood screws for each diameter face cap I wanted to work with, I placed the screws in the 9, 12 and 3 o'clock position *(Illustration 2)* and tightened them down to the proper height for each type of cylinder.

To keep the screws from scratching the caps that they hold down, I coated each screw with the plastic coating that you can use to dip tool handles in.

Now all you have to do is slide your partially assembled cylinder with the face cap on it, face down between the screws. The screws act as a vise to hold the face cap in place while you

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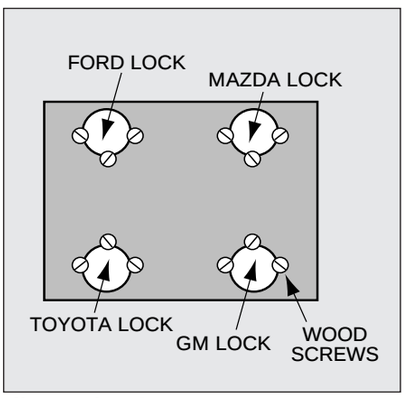

Illustration 2.

use a screwdriver or other tool to bend the tabs over.

With the terry cloth-covered base and the plastic coated screws, you are virtually guaranteed to be able to replace face caps without scratching or marring them.

As you can see from the diagram, you can accommodate various automotive locks on the same board. I hope you like this method as well as I do.

Bobby Brown
Florida

HPC Pistol Pick Winner

Solving Master Tailpiece Hang-Ups

When installing Master Lock deadbolts, I have encountered a problem with some of the tail pieces binding after retracting the bolt. When doing so, you try to remove the key and find that the plug is not lined up properly to release the key. Recently, I installed six of these deadbolts and four of them bound up on me when I tried to make the half turn back to the 12 o'clock position after unlocking the lock and trying to remove the key.

The problem apparently stems from a rough projection on the tail piece that is created during the manufacturing process. This projection hangs up on the cylinder boss, causing the lazy cam to malfunction by not turning all the way around to it's proper positioning to enable the key to be removed.

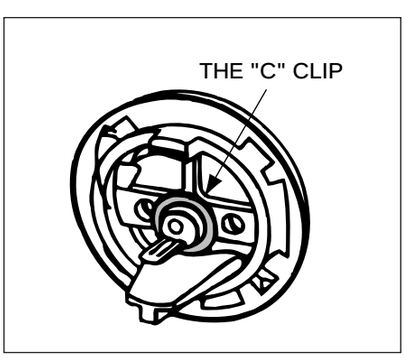

Illustration 3.

To rectify this problem, first remove the "C" clip which holds the tail piece to the cylinder *(Illustration 3)*. Remove the tailpiece and place it on the edge of your work bench and gently file the end until smooth.

Reassemble the lock and check for proper operation before re-installing on the door.

Larry Kanzer
Pennsylvania

Sargent And Greenleaf Winner

Rapid Ford 8-cut Key Generation Procedure

Here's a tip for generating keys for the new Ford 8-cut that has helped me to quickly and easily produce a working key for these cars with little aggravation or strain.

When making a key for these vehicles, before I do anything else, I look into the ignition lock with a scope. Starting in the front, I observe the bottom side wafers. I have found that the depths are stamped on the wafers and that a spiral key extractor works very well in pushing the wafers down one by one to allow viewing the

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depths without obstructing the view.

This will give me the 2nd, 4th, 6th and 8th cuts. Having these depths right off the bat makes getting a completed key easier. Using these cuts, I only have to impression cuts 1, 3 and 5 to have a key that will work the doors and trunk. Then, I simply progress the seventh cut to generate a key that will work the ignition.

To make things even easier, I know that these locks have a MACS of two. That means, if my sixth cut is a four and my eighth cut is a one, my seventh cut can only be a two or a three. I'm sure someone can figure out a progression chart for these locks based on the known cuts of the ignition.

If you try this and the numbers on the bottom wafers are covered with grease, just use a little spray lubricant like WD-40 to wash the grease off the wafers and clear up the numbers.

Joel T. Fitchner
Alabama

Silca Key Blanks Winner

Honda Trunk Release Bypass

I was called to retrieve the keys in a Honda Accord LX. When I opened the car, the keys were not in the passenger compartment but in the trunk. Unfortunately, the interior trunk release lever was in the locked position.

I have spent a lot of time in the local junk yard tearing old car locks apart for the parts and the experience. I picked this idea up from working on an older Honda.

With a small screwdriver, carefully pry the plastic cover up over the trunk release lever. Once the cover is removed, you will see a small screw toward the seat side of the mechanism. Remove this screw.

Use the screw or a small screwdriver under the edge of the lock cylinder and gently pry upward, working the screw around the edge. You will be able to pry the cylinder up about a quarter of an inch.

Now, rotate the lock cylinder counter-clockwise (toward the front of the car). This disengages the lock from the lever and allows you to lift the lever and open the trunk.

To put everything back together, simply reverse the process and you're done.

Albert W. Christopher, CRL
South Carolina

Pro Lock Pick Set Winner

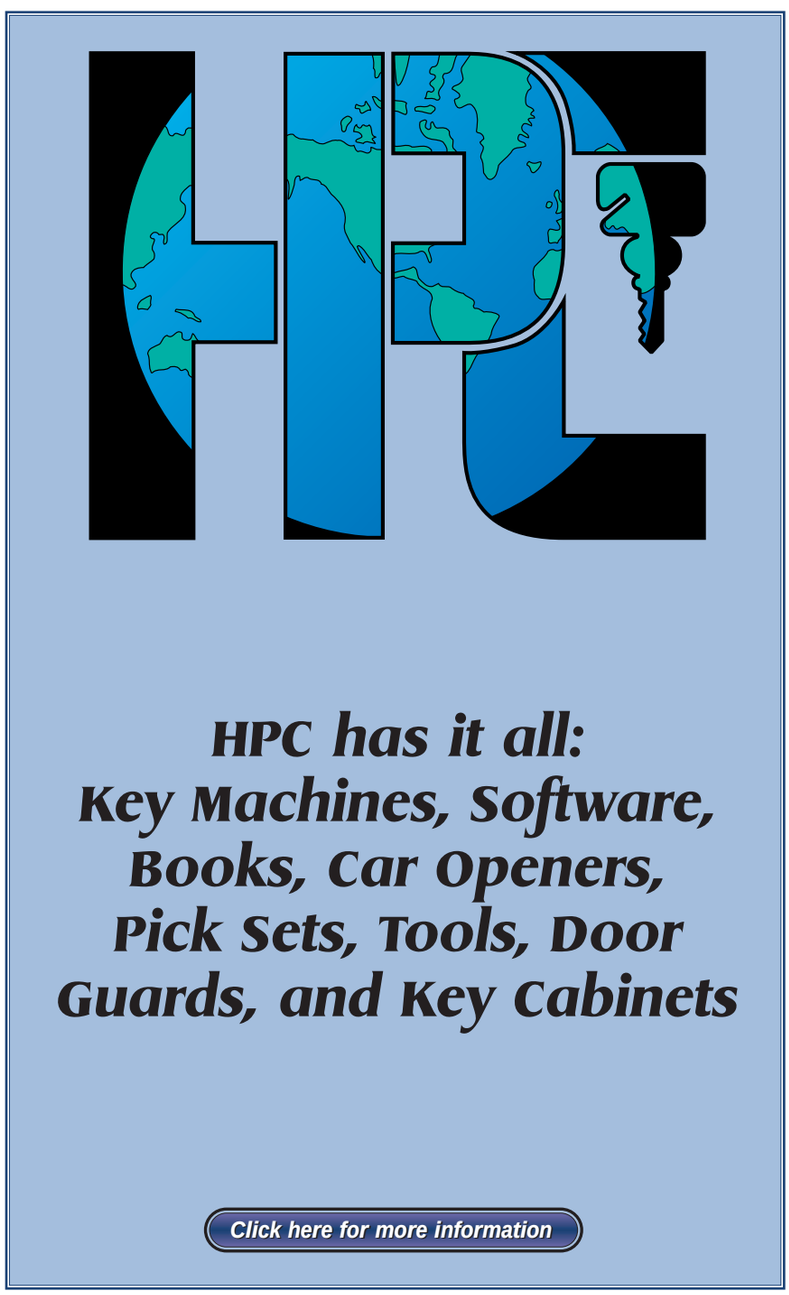
Latchbolt Lockup

A customer called complaining that she could turn the lock with her key, but the lock would not unlock. Suspecting a broken tail piece, I headed out for the customer's home. By the time I had gotten there, she had entered through another door, removed the thumb turn on the broken lock and literally destroyed the bolt mechanism trying to force back the bolt.

Examining the lock, I determined that the tailpiece and retainer was, in fact, operable which indicated another problem with the lock. Closer examination of the lock showed me that the bolt was indeed withdrawn, but the door would still not open.

The door was very tightly fitted to the jamb and I used a small pry-bar (like the ones painters use to pry open painted shut windows, etc.) and spread the door and jamb as far apart as possible. What I saw was the two screws which hold the latchbolt to the door had loosened and was gouging into the strike, effectively "locking" the door.

Continued on page 110



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Continued from page 108

I pushed the screws back with an ice pick and opened the door. After filling the screw holes with little wooden plugs that I carry — with Locktite on them — I let them dry a few minutes and replaced the damaged bolt. The lock worked fine.

James Harding
Delaware

[Editor's Note: As James' tip proves, the problem is not always the most obvious one. For the newer locksmiths out there and maybe some of the older ones who might not have encountered a similar situation, when a customer calls to say that the lock is not working check the lock first and if you don't find a problem with the lock, check for a bind somewhere else on the door. That includes checking for loose strike plates and protruding or improperly installed screws. It may even mean taking old Mother Nature into account.]

Tech Train Video Winner
The Expanding Door Syndrome

I'm a new locksmith and don't know if this will help some of the guys and gals that have been locksmithing for a while, but it might help another novice like myself.

The first big job I was involved in was rekeying a new restaurant (still under construction) and installing a Simplex Unican L-1000 on the back door of the kitchen. The door was metal and this was the first and only Simplex I had installed. Two days later the customer called me to tell me the contractor could not get the lock to work and resorted to prying the door open to get in (no key bypass on this one). That, of course, ruined the latch.

I drove over to the next city and picked up a latch from a supplier there and installed it on the door. I tried the combination and everything worked fine. The next day, the customer called and said they couldn't get the door open from the inside or the outside. I asked them not to do anything to the door until I got there and headed to the restaurant.

Sure enough I could not get the latch to retract after entering the combination. And from what I could see of the latch, it did not appear that the anti-friction pin or deadlatch pin had slipped into the hole in the strike. I went inside and tried the inside lever. No luck there either.

Inside, two things struck me. One, when I walked towards the door, I was nearly blinded by the sun coming through the security window. And, two, when I pushed against the door to try to force it open, it was really hot! You got it! The door faced due East with nothing to protect it from the morning sun. As the sun rose, it heated the metal door causing it to expand, which bound the latch. (It was a tight door anyway.)

I went outside, used the customers hose to spray cold water on the door, entered the combination and opened the door. The customer was impressed and I haven't had to go back to service the Simplex since. Now, as a matter of course, I tell customers with East-facing metal doors that they could have a binding problem on hot, sunny days.

James Whitman
Kansas

Sieveking GM Wheel Puller Winner
Roll Pin Removal

I used to dread being sent to a job where I had to remove a Nissan or Ford Escort ignition for repair or key generation. I just hated to try to remove the roll pins to remove the ignition cylinder.

I was taught to drill a 3/32" or a1/8" hole along side of the roll pin and then using a blunted ice pick or scratch awl, to pry the pin up and out. Not only was this difficult, I frequently wound up with holes in my hands or fingers when the ice pick slipped, or I would often cut myself on a sliver of metal when the ice pick slipped and gouged the housing. At any rate, removing these ignitions has been aggravating for me.

Now, I still drill the hole beside the roll pin, but instead of using an ice pick or scratch awl, I use a #10 or a #15 Torx screwdriver! Usually, I can get these pins out on the first try with the Torx and I leave my fingers intact.

The Torx screwdrivers have turned a normally thirty minute job into a ten minute job for me. If you try this, I think you'll be surprised at how well this works. Although I have not yet broken a Torx driver, I do use the ones that are guaranteed for life from the company you buy them from - just in case.

Robert Brown
Florida

Major Manufacturing Winner
Lexus Trunk Popping

A customer had locked her keys in the trunk of her Lexus SC400. I asked her if the car had an inside trunk release and she said that it did. As I headed out to the job, I didn't think that it would be much of a problem to retrieve the keys and get the customer on her way.

I opened the door fairly easily and pulled the trunk release lever. Nothing happened. Apparently the Lexus alarm system disables the trunk release until the alarm is disarmed with the key.

With her spare key three hours away and the dealer promising a key within three days, the customer was desperate, so I decided to remove the rear seat to see if I could access the trunk that way. Not finding any holes I told her I thought the only way would be to drill the lock. She agreed. But when I saw the location of the cylinder in the tail light housing, I opted not to drill the lock.

I realized that what I had to do was fool the alarm into thinking the key was turned in the lock. Here's how I did it.

I removed the door panel. This is easy since there are only a few screws holding it on. After peeling away the water shield, I located the back of the lock cylinder and followed the harness coming off of it to the connection closest to the bottom of the door *(Illustration 4)*. Then, I disconnected the connector.

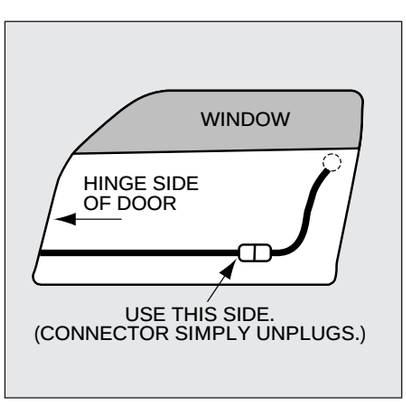

Illustration 4.

Using the connector piece closest to the hinge side of the door, I jumped the connector and "unlocked" the door locks. Once the doors were unlocked, the alarm was shut down and the trunk release lever could be pulled to open the trunk.

If the trunk release lever is manually locked you can use the same "jump" method on the back of

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the trunk release lock. Just remove the connector from the back of the lock, jump between the proper contacts and the trunk will pop open.

This is a lot faster and easier then it may seem and it sure beats drilling. I have not tried this method yet on other Lexus models but feel it should work just as well.

Scott Aronson, Jr.
New Jersey

Sieveking Auto Key Guide Winner
Peel The Rubber

If you get called out for a broken key in a Nissan door (or ignition) and the car is locked and the customer has the original rubber headed key, just peel the rubber back from the shoulder of the key to reveal the code number stamped on it. Then you can code cut a new key and unlock the vehicle.

If the customer does not have the original key, the code is, as most of you know, frequently written on a piece of paper and stuck to the wall of the glove compartment. This applies to older Nissan vehicles.

So, check under those rubber headed Nissan keys for the code numbers. You'll be surprised at how often you'll find what you're looking for.

Larry Bennett
California

Jake's Grab Bag Prize Winners
Astro Opening

I do a lot of vehicle lockout calls in my area and the one vehicle I often have trouble with is the 1989 Astro Van. Even though I have an Astro tool, I find it is easier to wedge the window on the sliding door and reach in with a Slim Jim and pop up the window lock clamp in the front and then in the back of the window.

The window will open about four inches and then I reach in through the window and unlock the door. Quick and easy, don't you think?

James W. Mortimer
Iowa

Drillers Hand-book

There's a book available from a company called Lindsey Publications (P. O. Box 538, Bradley, IL 60915-0538. Telephone 815-935-5353) called "The Drillers Handbook". This publication sells for $3.95 and tells you everything you ever wanted to know about grinding and sharpening bits.

It's a gem of a book that every shop, in my opinion, cannot afford to be without.

C. J. O'Donnell, RL
California

[Editor's Note: Lindsey Publications offers a free catalog of their publications to anyone interested. Just drop them a line at the above address and ask them to send you one.]

Mortise Lock Opening Alternative

When servicing a lockout on a full mortise lock when the deadbolt is not thrown, try removing the outside knob and see if the spindle and inside knob can be pushed inside the door. If it can, you can fashion a tool from a 3/16" carriage bolt by squaring off the end with a file or grinder, and bending the bolt at a right angle about two inches in from the end.

Insert the tool in the spindle hole and wedge the inner hub to retract the latch. This works well when the spindle can be removed and if the lock has a particularly hard cylinder to pick.

Jack Tom
New Jersey

[Editor's Note: Here's another application where I think the Snake Pick from Mark Bates and Associates (1-800-555-4471) is made -to-order. The Snake Pick is capable of manipulating either the deadbolt or the latchbolt of mortise locks that do not have a block at the end of the keyway. Thanks for the tip, Jack!]

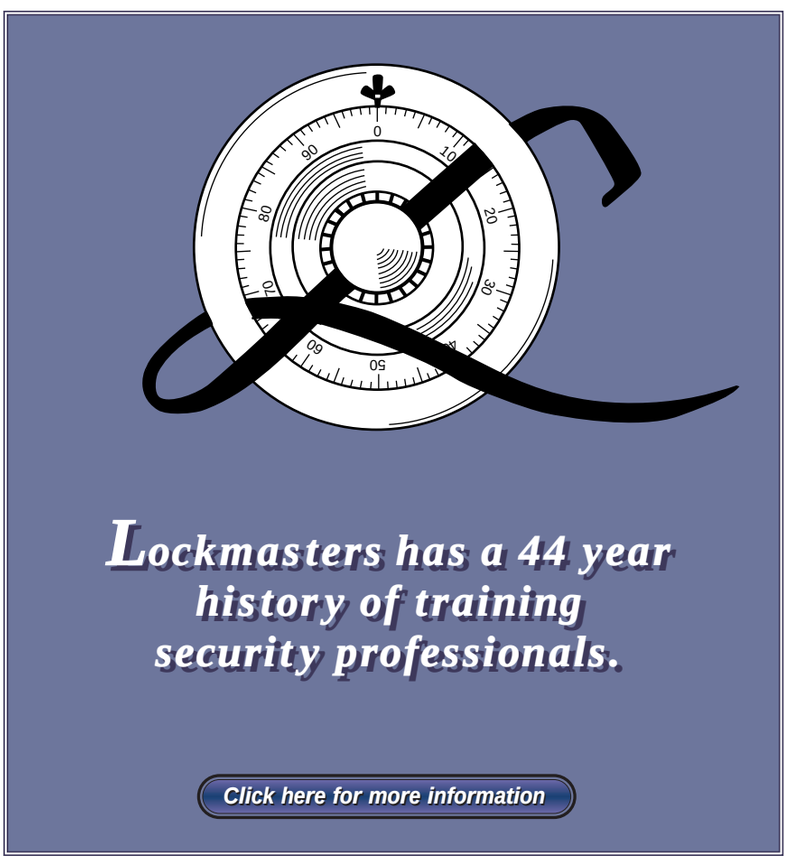
Lighted Follower Update

Thanks for printing the tip I sent you regarding the use of a Mag Silhouette flashlight with a 1/2" copper union and an aluminum nipple as a lighted follower. Here's an improvement on that idea.

Obtain a 1/2" O.D. copper nipple about 1-3/4" long. Insert it in the union that is on the end of the flashlight. You now have an adapter that will work well with HPC's follower set (HPC part #SUT-14). The .395" follower will slide inside of the nipple and the .546" follower will slide over the nipple giving you the advantage of a lighted follower.

Bob Davidson
South Dakota

TNL



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The Lighter Side

Pop Art?

by Sara Probasco

There I was, trying to prepare for an audit by the State of Texas on our Workman's Comp figures (Nothing personal, they said. They just reach into a hat each month and pull out a certain number of names to audit.) when Don poked his head into my office.

"Busy?" he asked.

He had to stand on tiptoe to see over the mound of paperwork that surrounded me as I waded through a year's employee records. Not only was I researching information to make lists of various overtime payments, contract labor, and the like, I also had to fill in a stack of forms to take with me to the audit.

"Wonder if you can give me a hand back here," Don continued without waiting for me to respond. "We're trying to unload a safe, and I need you to hold the door open."

The safe in question was a new one recently purchased by the local junior high school. A few weeks back, someone had broken into the school and burglarized their light-duty fire safe in the main office. After peeling back the corners and opening the top, they had stolen money from the top area of the safe. However, they hadn't been able to reach a large quantity of cash at the bottom, due to a shelf they couldn't get around.

Responding to a school official's call, Don ordered a BF 1716 AMSEC safe for them, along with a couple of other safes for our inventory. As the junior high school lacked funding for a heavy-duty burglary safe, this seemed a good choice.

When TexPac delivered the safes to our store, Don slipped the driver a ten dollar bill to drop the school's safe at the school warehouse. Following TexPac there, Don opened the carton, checked the safe, and notified school personnel that it was there, and they moved it into the junior high school office themselves, that afternoon.

The next night, someone broke into the school office again. They tried to peel this safe, too, but had no luck. Then they banged up the dials, bolts, and handle, obviously trying to get into the safe that way, to no avail. Apparently frustrated, they tore up the office and left empty-handed.

The next morning Danny, one of the school maintenance men, brought beat-up entry door knobs and locks into our store for repair and told us what had happened.

"What about the safe?" Don asked.

"They banged it up pretty bad, but it doesn't look like they got into it," Danny replied. "The thing is, nobody can get it open, now, to see for sure."

"How are they trying to get into it?" Don asked.

"I'm not sure," Danny said. "Maintenance is working on it."

"Tell them to call me, before they really mess things up," Don suggested.

Several days passed, and no one called Don for help. Finally, Don contacted the school and asked to speak to the man in charge of getting the safe open. He was passed down through the bureaucratic layers in the maintenance department until he was finally told the man in question was the school electrician, but he wasn't in just then. They would tell him to call Don when he returned.

Another couple of days passed before the man called to ask if Don could get into the safe and how much he would charge.

"I'd have to see the condition of the safe before quoting a price," Don told him.

The electrician said he'd bring it down to the store.

More than a week passed, but no safe. Don called them again.

"Oh, they took it to maintenance," he was told. "They're planning to take a torch and pop it open."

"What do you mean, 'pop it open'?" Don asked. "Look," he said, trying to calm down a bit, "anything you do now is going to mess up the safe worse and make it harder for me to work with. That's going to wind up costing you a lot more, in the long run."

"They just want to see if they can get it open."

"Don't! Bring it down here and I'll do it for you."

"Okay, okay."

Ten days passed. The telephone rang. Don recognized the voice of the school principal.

"Don, can you get this safe open for us?"

"I showed you our entire stock of locks. If you want something even less expensive may I suggest this?"

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The Changing of the LaGard

The 33E Series Electronic Lock

by Dale W. Libby

LaGard has introduced a new type of combination lock with the advent of the 33E Series. This lock can either be set up as a deadbolt or standard type lock, the 33E-1, or a springbolt lock, the 33E-2 series. This article will discuss aspects of the deadbolt lock.

The 33E is a compilation of the swingbolt electronic type lock and a standard mechanical lock. *Photograph 1,* shows the #3405 Digital programmer and the 33E combination lock. We will talk about the programmer later. To operate the lock, just punch in the working combination, the diode lights, and the lock beeps. Now the outer combination ring is turned 90 degrees (1/4 turn) to the right to withdraw the combination lock bolt. If the wrong combination is entered, the key pad will not turn.

Photograph 1. On the left is the #3045 hand held programmer. On the right is the 33E series deadbolt combination lock.

Photograph 2. This shows the dial in the unlocked position, 1/4 turn to the right.

Photograph 2, shows the keypad turned to the right and the bolt retracted. Another interesting feature about this lock is that when the keypad is turned, the wire connecting the keypad to the lock also rotates 1/4 turn. The lock has been engineered so that the lock body is raised on 3 mounting pads above the mounting plate. This gives ample space for the wire to move without binding or kinking.

STANDARD FEATURES

This lock can be used to replace most Group I or Group II combination locks. This lock is rated as a Group I lock by Underwriters Laboratories. It uses the same footprint as other combination locks, but only requires three mounting screws to hold the lock case to the door. It appears to be an easy retro fit. Perhaps, this lock could also be used in situations where there is a blocking bolt attached to the end of the combination lock bolt, as in some Mosler or Diebold Cashgard applications. I am not sure what

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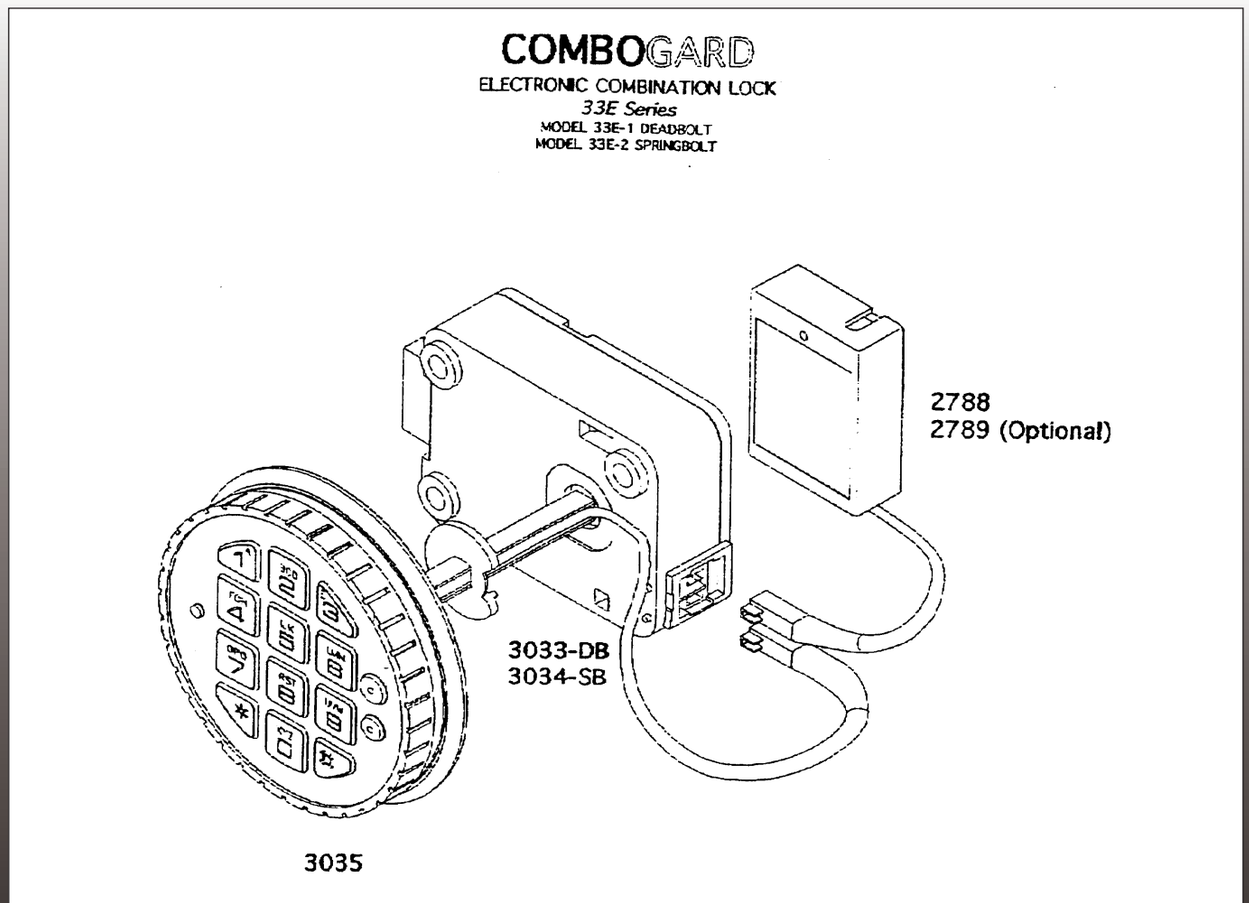

Illustration A. The channel cut in the spindle is for the wire run between the dial and lock body.

the manufacturer would say about this.

There are many more parts to this lock than the standard swingbolt type lock. As with mechanical lock replacement, the spindle must be cut to size. The same is true with this lock *(see Illustration A)*. There is a brass spindle with a channel cut in it. This channel is for the wire that attaches the dial assembly to the combination lock. This must be cut and measured after the dial ring mechanism is installed.

Photograph 3, shows the back of the combination lock. The mounting screws also hold on the cover of the lock and the lock is taped shut. The two cover screws on the lock are NOT to hold on the cover, but for the attachment of a relock plate. With a little filing of the plate, both LaGard and S&G relock covers and arms can be easily attached using these two cover screws.

Above the lock *(in Photograph 3)* is a small black battery box. This holds one 9 volt battery which powers the electronics. This is attached to any convenient part on the inside of the safe door by double faced tape or with one included screw. Optional battery configurations are available using C or D batteries.

What happens if the battery goes dead and the safe is locked? On the outside of the dial ring, next to numbers 6 and 9 on the keypad are a couple of con-tacts that mimic the ends of a 9 volt battery. If the battery inside is

Photograph 3. A back view of the 33E lock, three mounting screws, two fake screw covers, and the 9 volt battery box.

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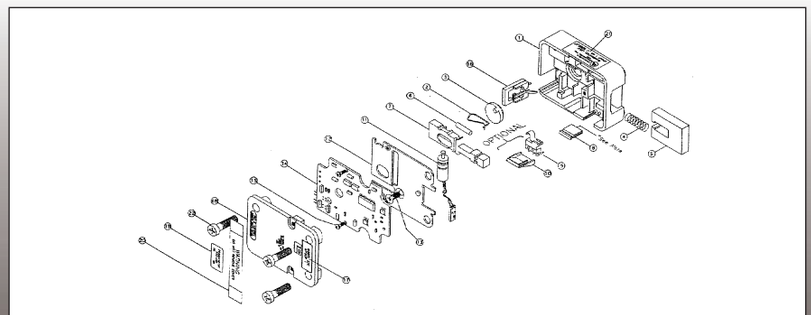
dead, then just hold a fresh 9 volt alkaline battery to the contacts, enter the existing combination, and turn the outer ring whilst holding the battery in place.

If you place the battery in the wrong polarity position, nothing will happen. The keypad will not register any input. The pad will not beep and the diode will not flash. Just reverse the battery and the lock will open. These contacts are labeled External Emergency Power Terminals.

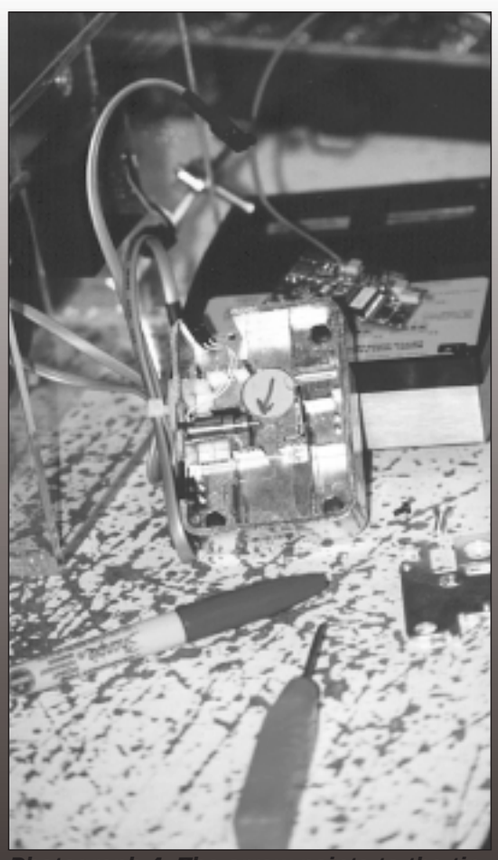
Another basic function includes a wrong try penalty. If four wrong combinations are tired, the lock will shut down and not accept any input through the key pad. The diode will blink every 10 seconds until the waiting period is over.

The combination can be changed on this series of locks in the standard way, the 0,1,2, or by using the optional combo gard programmer. These days, we change combination, or reprogram combination locks. Progress!



Item #	P/N	Description	Qt.
01	2681	Housing	1
02	2624	Relock Spring, 33E	1
03	2679	Cam, (Square Shaft)	1
04	2880	Bolt Spring	1
05	2886	Bolt	1
06	2307	Dowel Pin, (3/16 x 7/8)	1
07	2686	Block	1
08	2694	Insert	1
09	41036	Micro-switch, (#311SX4-H391) (optional)	1
10	2756	Insert (optional)	1
11	2972	Solenoid Assembly	1
12	2684	Plate	1
13	50202	Mounting Screw, (6-32 x 1/2 Phillips Flat Head, Cap.)	1
14	49078	Populated Analog Lock Circuit Board	1
15	2949	Mounting Screw (3-48 x 3/16 Phillips/Slot, Pan head)	2
16	2693-A	Snap Connector	1
17	2749-A	Label, (Yellow)	1
18	2692	Cover	1
19	45008	Label,(Brady, #DAT. 97-673-10)	1
20	2656	Label	1
21	1977	UL Label, Group 1, Combination Lock	1
22	2930	Mounting Screw, (1/4-20 x 1-9/32 Phillips/Wafer Head)	3

Illustration B. Exploded view of the LaGard 33 Series electronic lock.



Photograph 4. The arrow points to the tip of the solenoid that blocks movement of the combination bolt.

The 0,1,2 changing procedure is easy and simple to remember. First enter 6 zeros, 0,0,0,0,0,0. Then enter the existing combination once. When the pad beeps, enter the NEW combination twice. After each enter, there are beeps. Now, try the new combination and it should work. If you have messed up, the old combination will be the default combination.

ADVANCED FUNCTIONS

The 33E series locks can be further programmed with advanced functions. TO do this, however, a hand held electronic programmer is needed. LaGard Part number is #3405 hand held programmer. With this optional unit, further features can be incorporated into the 33E series locks. These include:

1. Second user
2. Time delay, 1 to 99 minutes, and an opening window of between 1 - 19 minutes.
3. Time delay override -Emergency opening
4. Dual Combinations
5. Silent Signal Alarm
6. Remote override signal

I will not dwell on these functions for a very basic reason. The programmer costs about $275.00, but before you can buy it, you must receive training on how to use it. The basic 33E series lock costs $109.00 and can be used to retrofit most combination locks without prior instruction or use of the programmer module.

INSIDE STUFF

I took the mounted lock apart to see some of the inside functions. I have included some of the schematic (blown apart) picture of the 33E series locks for consideration *(see Illustration B)*. I found a couple of interesting parts that I missed on the diagrams. *Photograph 4,* shows the inside of the lock with the spindle cam marked with a magic marker arrow. The arrow in this picture is pointing to the solenoid (similar to the one on the 3300 swing bolt series of locks) that blocks the movement of the lock bolt. This solenoid is larger than the swing bolt unit and beefier.

Photograph 5, has the arrow pointing to a relock spring incorporated into the lock. If the back cover is broken off, this

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spring will activate and fit into a slot of the combination bolt. It looks like a standard type LaGard relock spring.

Another nice touch is the inclusion of a dowel pin (3/16 by 3/8 inch). I saw this in the diagram and could not figure out what it was for, until I tried to make a mark on it with a new file. This pin is hard (REAL hard), and rotates within the end of the combination bolt. By its position, it can only be to protect the end of the solenoid from being drilled off. This dowel hardened pin can be seen in *Photograph 6*, near the end of the internal bolt.

OPENING PROCEDURES??

Since I have not met any of these locks in the field, I have not determined a good method of opening these locks. If the lock will NOT accept any input from the keypad, and the use of an optional battery on the outside does NOT fix the problem, then drilling must be done, which also means that a new lock will have to be used.

It is possible to remove the dial ring from the outside of the unit, but not without damage to the keypad. When installing the keypad, the unit is placed so that the #2 button is in the 11:00 o'clock position. This will allow the dial ring pad and unit to fit over the mounting screw cutout in the back of the pad. The unit is then turned to the 12:00 position, and can be rotated to the 3:00 open position.

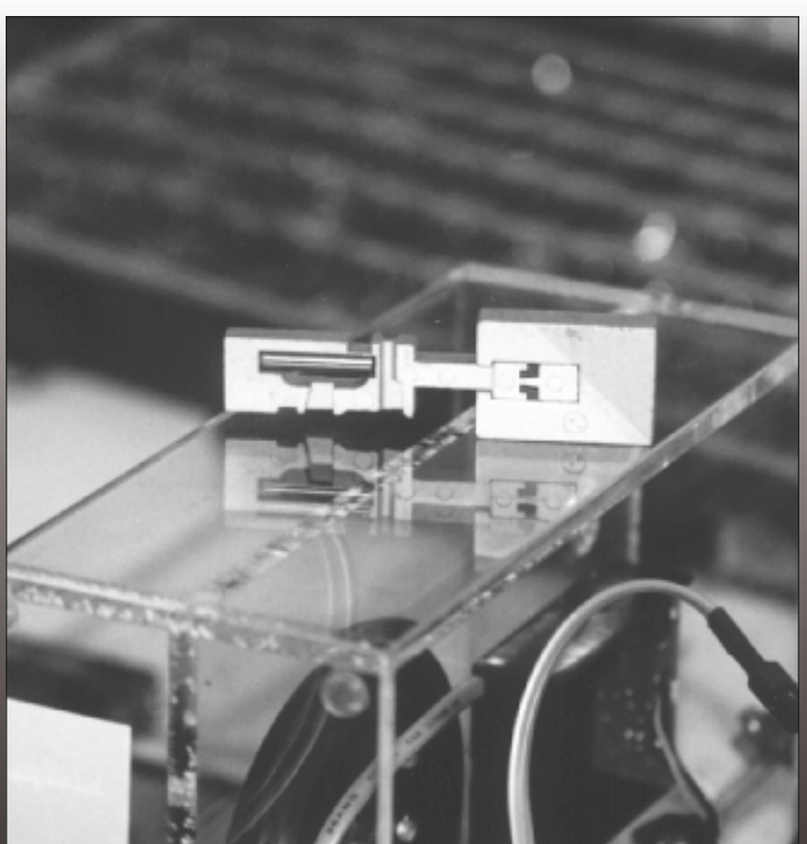
The pad is held in alignment by the spindle when it and the lock body have been correctly installed. This will not allow the pad to be turned back to the 11:00 position. It can only be rotated between 12:00 and 3:00.

By prying out the keypad cover and other components, the mounting screws can be reached and removed, along with the remaining pad parts and spindle, thus making an under the dial penetration possible.

The position of the spindle on a right-hand mounted lock is approximately 1 inch toward the end of the combination lock bolt and 1/8 inch down. Drilling at this position will sever the end of the solenoid. The lock bolt interior cam will have to be turned. This unit has a square shaft. I will let you know how this works when I have to drill my first unit. I am a little leery of that rotating dowel pin.

Removing the dial key pad and punching directly down the spindle hole will accomplish noting that I can see, except to set off the relocker spring, and to possibly disconnect the front of the bolt from the rear of the bolt. Open and install electronic locks and PROSPER. I would like to thank Lockmasters for sending the Lucite mounted lock and programmer for inspection. TNL

Photograph 5. Now the arrow points to the relock spring.



Photograph 6.The 33E-1 deadbolt and extension. Notice the position of the hardened dowel pin at base of bolt.

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KEY CODES

GM Code Series continued

AA00-A999

HPC 1200 CM
Code Card - CF215
Cutter - CW1011
Stop - 1054R Tip Stop (Ford 10-Cut)

Framon
Cut start - .216"
Cut to cut - .092", Spacing Block #3
Cutter - FC8445
Key Clamping - Lay spacing clip F2MS552 flat on left side of vise and align from tip.

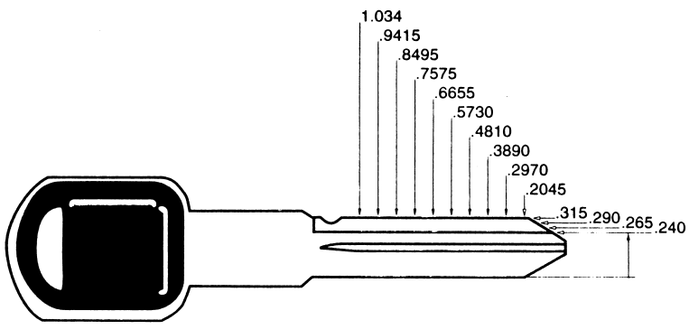
Curtis
Cam - GM6
Carriage - GM6A

KEY BLANKS

B&S	5995936
Silca	GM37(EP)
Curtis	B82
Ilco	P1102
Jet	B82(PH)
EZ	B82
ESP	B82

Spacing and Depths using Universal Micrometer Card #58.

	Spacing	Depth
1	.1850	.315
2	.2775	.290
3	.3700	.265
4	.4625	.240
5	.5550	
6	.6475	
7	.7400	
8	.8325	
9	.9250	
10	1.0175	



Key Profile

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AT32	1122312422	AT62	1123221233	AT92	1123213424	AU22	1123421312	AU52	1121343132	AU82	1121231343
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AT34	1123232424	AT64	1123313134	AT94	1122421244	AU24	1122132433	AU54	1121132442	AU84	1123134432
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AT39	1123213242	AT69	1123133434	AT99	1123312332	AU29	1122433444	AU59	1122322443	AU89	1122131323
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AT42	1122433112	AT72	1122331122	AU02	1122424243	AU32	1122342234	AU62	1123242124	AU92	1121124234
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AT58	1122432244	AT88	1122321133	AU18	1123131324	AU48	1121244242	AU78	1123321124	AV08	1121332344

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AV09 1122312434	AV65 1122321244	AW21 1123243312	AW77 1122442232	AX33 1131233424	AX89 1131322324
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								AZ44	1124233122		

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Reed Report

I have had many requests to report where the people are in my "Scattershooting" segment. I hear from some, but not always. I thought I would pass along all the Scattershooters I have heard from to date: Steve Ziet is working for Home Depot in Florida; Rex Parmelee is working for a promotional items company that sells primarily to schools and colleges; Bob Dickie is living in Vermont and has a VCR repair shop; Barbara Bass is still working with Acme in New Orleans; J. Flynn is doing well and living in Dallas; Len White is retired and spending a lot of his time with his children, and I am sad to report his beloved wife Arlene has passed away; Mike Miller has left our industry and is now working in the roofing industry; Joyce Laurie is doing well, living in Dallas, and is a proud grandmother. In the future I will keep you up to date just as soon as I find them.

Scatter Shooting while wondering whatever happened to . . . PAT HOLDER

***Q**. I just opened my own lock shop and, unfortunately, missed the yellow page advertising. What do you suggest I do until the new book comes out?*
A. This happens all too often with locksmiths. I still think the best form of advertising is face to face with your customer prospects. Attend the different clubs in your community and give brief talks on how you can better protect their property. Every person is interested in better security and we are blessed with being in the security industry. Use that to your advantage. Also, don't forget the police department. Get to know them...work with them. They are still your best source for new business. Finally, many cities have more than one phone book. Check this out and see if you can get into another. Many times they come out at different times.

***Q.** I want to get more involved in the motorcycle lock business, but not real sure how to do it. Any suggestions?*
A. If you are talking about repairing motorcycle locks, you won't have too much business since most locks will go back to the dealer. The biggest money maker for motorcycles is replacing lost keys. You can impression both the wafer locks as well as the pin tumbler locks. You can also sight read the wafer locks very easily. If you do need to rekey or repair the tumblers in the lock, you can get a pinning kit from Auto Security Products. Most wafer locks will have three or four depths. There is a good book in print on these locks titled "MOTORCYCLE LOCK SERVICE" and can be purchased from Security Resources for $15.00. Simply call (904) 476-2799.

***Q.** What is a "Slide Chart"?*
A. This was invented in the late 70's by my good friend Gerry Finch. This chart will help you determine the sizes of your bottom, master, control, and driver pins in masterkeying. By the way, if you ever need masterkeying help, there are a couple men who have written on the subject and in my opinion, know it all. Gerry Finch is one of these men and Billy Edwards is the other. Both men have written EXCELLENT books on the subject.

***Q.** What are Beta keys?*
A. Beta keyways are designed by ASSA for exclusive use for the locksmith. There are two types of Beta keyways, the Regional and the National. Regional assigns each locksmith one or more states as their boundaries. The coded key will not be reassigned in that area. The National assigns each locksmith one sidebar for the entire country.

***Q.** I have had trouble cutting the Chicago XF code series cam lock. It seems to cut perfect, but won't turn the lock. Any suggestions?*

A. Assuming you are cutting the key correctly, you might try using Chicago key blank K101H instead of AM101. There is a small spring loaded device that needs to be seated in the side of the key before the cylinder will turn, and the K101H blank has the dimple to take care of that. If you like to do everything the hard way, you can Dremel your own dimple. TNL

Yours For Better Security,

Bill Reed

If you'd like to attend a Bill Reed seminar, choose from the following. For more info, contact Bill directly at (904) 476-2799.

Aug. 17,18	Okla. City, OK	Oct. 13	San Mateo, CA
Aug. 31	Salt Lake City, UT	Oct. 29-31	San Diego, CA
Sept. 5	Philadelphia, PA	Nov. 1,2	San Diego, CA
Sept. 15	Syracuse, NY	Nov. 9	Honolulu, HI

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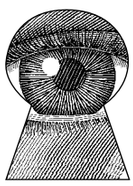
THRU THE KEYHOLE



A Peek at Movers & Shakers in the Industry

ATTENTION MANUFACTURERS AND DISTRIBUTORS:
Would you like your company and products to be profiled in *Thru The Keyhole*? Please call Managing Editor, Greg Mango, at (630) 837-2044.

Salsbury Industries, A Leader In Mailboxes

Since 1936, Salsbury Industries has been an industry leader in mailboxes and mailroom equipment. Salsbury has a full line of products including brass and aluminum mailboxes, mail carts, mail bags, stamp machines, collection boxes, mail drops and sorters. Systems can also be customized for specific mail delivery requirements.

The number one customer of Salsbury Industries has been the United States Post Office. Throughout the years, Salsbury has been awarded numerous postal contracts based on its ability to manufacture the highest quality products at the best possible price. In fact, you have probably seen Salsbury's traditional brass or modern aluminum P.O. boxes in your local branch post office.

Salsbury presently works in cooperation with many locksmiths who resell their product line. The products Salsbury offers are institutional quality and are found in mailrooms, apartments, businesses, government agencies, private postal centers, universities and homes.

Salsbury has a trained and knowledgeable staff to assist dealers. From selecting the proper equipment to space saving ideas, they will guide one every step of the way. Experienced professionals will answer all questions regarding products and general information. Furthermore, its engineering staff can be called upon to custom design and layout a mailroom to fit needs for now and for the future.

For over 50 years, Salsbury has put its reputation on the line. That reputation has been built by providing well designed products which can provide a mailroom with the efficiency, security and years of trouble free service it requires.

For more information on reselling mailboxes and mailroom equipment please contact Salsbury Industries, 1010 East 62nd Street, Los Angeles, CA 90001. Phone (800) 323-3003 (213) 232-6181. Fax: (213) 232-7021 TNL

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TEST DRIVE

Taking Industry Products for a Spin Around the Block

ROTO ZIP SPIRACUT

In search of the ultimate tools for the locksmith's tool box, sometimes we find tools only we should use, other times we borrow from the other trades. In some cases, we find a tool which could almost be designed exclusively for locksmiths, but isn't, but it's too good to throw away.

The SpirAcut is one such tool. It is used heavily in the construction trades. Simply, it's designed to cut rough openings in drywall, ceiling tile, ceramic tile, wood, and a number of other materials found around new construction. What it doesn't really cut is metal.

PRODUCT DESCRIPTION: SpirAcut by Roto Zip Tool Corporation, Cross Plains, WI., is a rotary tool designed for the tradesman to provide an alternative to the saber saw. Cabinet makers might use it to cut a circular hole into a counter-top to fit a sink bowl. Plumbers might use it to cut a hole in the wall or ceramic tile to fit pipes through a wall. Electricians or locksmiths might use the tool to cut a passageway through a ceiling, wall, or tile to run wire or install a gang box.

The tool looks like a big brother to the hobby rotary tool which many locksmiths use from Dremel. This tool could almost be considered a cross between a hobby tool and a router.

OPERATION: The machine operates with 120VAC at a no load speed of 30,000 RPM. Roto Zip also makes an assortment of specialty bits to cut through plywood, paneling, chipcore, waferboard, plastic, fiberglass, cultured marble, vinyl and aluminum siding, cement board, ceramic tile, and plaster. The most common diameter of bit is 1/8" but bits which are rated for this machine can be used up to 1/4" by switching the collet. Model SCS01Type1 has a handle for easy two handed operation, the RTM02Type2 is virtually the same machine without the handle. The handle not only gives additional grip, but also serves as a storage place for the wrench, bits, and extra collet.

One way to make a hole is to trace the design of the hole, choose and install the proper bit, adjust the depth guide so that the bit is about 1/8" longer than the material to be cut, turn on the machine, drill a hole with the bit on the inside of the larger hole to be cut, and trace with the cutter the design of the hole in a clockwise direction. Attempt to start and finish your hole at the top so that the "discard" piece will not fall into the rotating bit and shoot out upon completion. With a little practice, your completed holes should be as good as your freehand drawings.

The tool is designed to be used with its own or compatible bits, which to date, does not seem to include a bit for aluminum as found in storefront doors, or steel as found on steel clad doors. Bit diameters are to be exactly .125" or .250", not under-sized. Many bits, nominally 1/8", are actually .118" and may prove a slipping hazard, and are not to be used in this machine. Also, any bit used in this machine must be rated to the machine's capacity of 30,000 rpm.

COMMENTS: This tool will make life a little easier for the locksmith while executing a number of his or her daily tasks. It's excellent for rough openings and proves to be a time saver. The holes are easy to cut, whether cutting ceramic tile or drywall.

SUGGESTIONS AND CONCLUSION: I don't believe that the locksmith trade was actually considered in the designing of this tool, but that's okay. With a few minor design modifications and/or options, this tool would be an indispensable locksmith tool. Right now the tool is obviously a virtual necessity for carpenters, drywall specialists, and electricians. While locksmiths could benefit from this tool as is, the addition of adjustable templates, similar to the depth guide, which could help us make a "measured" straight line for strike plate installation, and bits to cut metal to aid in the installation of electric strikes, locks in aluminum doors, or to tweak a miscut deadbolt cross bore hole in a steel clad door, would be a godsend.

Suggested retail list price for the Roto Zip SpirAcut is: $99.00. For more information contact Roto Zip at: 1-800-521-1817. TNL

DESCRIPTION: Heavy duty rotary cutting tool.
PRICE: $99.00
TEST DRIVE RESULTS: Does a fine job rough cutting most construction materials. It's excellent for rough openings whether cutting ceramic tile or drywall.

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